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INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week
The Savings Will Run Out
You'll Have to SELL Again
We're Yearning for Friends
Be a Home Consultant
Unexpected Dividend
Well-Reasoned Rebuttal
Nobody Wins a Strike

Stories of the Week

While serving as curator of the British Embassy in Washington, a certain distinguished Englishman received word that he had been knighted by his King.

Quickly his admirers and well-wishers whipped up a party to celebrate this honor. In the midst of the stiff-collared revelries, the major celebrant was taken down a peg when he received the following cablegram from his nine-year-old daughter:

"Congratulations. You've made a Lady out of Mother."

Affiliation with a major newspaper enterprise such as the New York *Times,* the old Boston *Transcript,* the Kansas City *Star,* or the St. Louis *Post-Dispatch* usually makes brash young reporters stop and think a moment before indulging their natural inclinations to flout the canons of dignity.

This wait-a-moment attitude is well-distilled in the following apocryphal tale, which has been attributed to all of the above Daily Thunderers, and many others, besides. Here it is:

Following the untimely death of a wealthy civic leader, the latter's butler knocks on the widow's door and announces, through the keyhole:

"Several reporters are here, madame, and a gentleman from the *Times.*"

And here's another laugh we'd like to pass on:

An old Indian named Rain-in-the-Puss impressed a small Canadian community with his uncanny habit of predicting of changes in the weather.

He seldom missed.

One sad day the weather was particularly miserable—rain, wind, cold.

"Rain-in-the-Puss," inquired a hunter, "when will all this blow away? Bimeby nice day?"

The red man shrugged. "Dunno," he replied. "Radio—it done busted."

Here's a revise of an Old Classic about union regulations:

"Did you say I'll have to hire four electricians to help me rebuild this house?" asked the amazed owner.

"Yes," warned the boss carpenter. "Union rules, you know. One man to put in outlets upstairs, another man to put them downstairs."

"But that's only two."

"Yes, that's true. But the third man sees to it that the downstairs man doesn't put them in upstairs, and the fourth man sees to it that the upstairs man doesn't put them in downstairs."

The Savings Will Run Out

As we have noted before, *everybody wants everything* today.

And most people have War Bonds —or money in the bank—far more savings than most citizens have ever enjoyed before.

Possession of these unaccustomed riches makes us feel mighty comfortable.

But just wait till we start to buy!

The Old Lady grabs a new washing machine, a dozen pairs of nylons, and a home freezer.

The Old Man buys a new car, two suits, and a badly-needed overcoat—plus a dozen white shirts.

Daughter outfits herself completely, from head-to-toe.

(Concluded on Page 7, Column 1)

'Commercial' Price Decontrol Is Clarified

WASHINGTON, D. C.—In informal opinions given during the past week, OPA has further defined the suspension of price control from commercial refrigeration and commercial refrigerator equipment.

Ice cream cabinets *without* partitions are still under price control (since they might be used for home freezers, which are still under control). But ice cream cabinets with interior partitions are not under price control.

Counter-type ice cream freezers, such as are found in ice cream retail stores, are suspended from price controls. The larger type of ice cream freezers used by dairy manufacturers are, however, probably still under control.

The suspension order on commercial refrigerator cabinets included all types of such equipment, even though specific items (such as dough retarders, etc.) may not have been mentioned specifically in the order.

August Motor Output May Hit 1,700,000

WASHINGTON, D. C. — Boosting its former estimate by 200,000 units, the Civilian Production Administration has predicted that an estimated 1,700,000 fractional horsepower motors will be produced during August.

The agency reported that during the year ending June 30, 1946, shipments of fractional horsepower motors averaged 1,063,230 units a month as compared with 885,097 per month in 1939. Total production for the year ending June 30, 1946 was 12,758,780, CPA said.

Butter Churns Whip Up Scarce Motors

PHOENIX, Ariz. — Ten thousand electric butter churns solved the fractional horsepower motor shortage for Oscar Palmer, manufacturer of evaporative type home coolers here.

Unable to get motors for his coolers last March, Mr. Palmer read about an Alabama firm that had made electric butter churns during the war. The churn maker could not sell the 1/20-hp. motors separately, so Mr. Palmer bought his entire stock of butter churns—10,000 of them for more than $100,000.

Mr. Palmer then stripped the churns of the motors and fitted the motors on his fan-type coolers.

Anybody want to buy 10,000 motorless butter churns?

Consumer Banking Group Demands Regulation W End

WASHINGTON, D. C.—Immediate repeal of the Federal Reserve Board's Regulation W governing consumer credit is demanded in petitions now being circulated among American businessmen by the Consumer Banking Institute here.

The petition charges that Regulation W "unfairly restricts the veteran in acquiring the appliances and furnishings to make his house a home, even though credit facilities and credit terms for the purchase of houses, businesses, and farms, are expanded.

In addition to demanding the repeal of Regulation W as an obstructionist regimentation and restriction of needed, sound consumer credit,

(Concluded on Page 4, Column 5)

Vets Get Priority On Ranges, Water Heaters, Burners

WASHINGTON, D. C.—As part of its broad program to hurry the construction and completion of veterans' housing, veterans will get first call on such appliances as ranges, stoves, water heaters, oil burners, and stokers under the priority system announced last week by Housing Expediter Wilson W. Wyatt and CPA Administrator John D. Small.

First announcement did not state just how this priority system will operate, but it is thought that veterans will probably be assigned HH ratings to help obtain these critical items.

Household refrigerators are apparently not included in the latest items which have been added to the veterans priority list.

The program also provides for sharp increases in "set-asides" by distributors and jobbers for veterans housing—as much as 95% of total production in some categories—of such things as plumbing and bathroom fixtures and some construction items.

In addition, steel priorities will be granted to manufacturers of steel prefabricated housing, and weekly authorization of non-housing construction will be cut from $45,000,000 to $35,000,000, according to present plans.

These regulations were contained in Housing Expediter's Priorities Regulation No. 5 which was issued by Wyatt's office following several days of inter-agency discussion between Wyatt and CPA as to who would take charge of the new program. This regulation, according to Wyatt's office, supersedes CPA's controls.

No fundamental changes in the priorities system will be made by this change, according to Wyatt's office, which also stated that applications which have already been approved will not be affected.

Beginning Sept. 10 all new applications for construction authorizations and HH priorities for housing will be filed with the National Housing Authority. Until then, applications will be accepted under the CPA regulation.

Kaiser Prepares to Turn Out Washers In 1947

PHILADELPHIA—Production of a line of washing machines developed by an unnamed company is scheduled to begin after the first of the year at the Fleetwing Division of Kaiser Cargo here.

A daily output of 200 machines is planned.

Kaiser reportedly has an agreement with the development firm to manufacture and sell the washer under the Kaiser name. Kaiser also is said to have completed its production lines here for the new dishwasher.

Ceilings Assigned On 2 Fraser-Johnston Freezers

SAN FRANCISCO — Two frozen food cabinets manufactured by Fraser & Johnston Co., 725 Potrero St. here, have been assigned ceiling prices for distributors, dealers, and consumers by OPA as follows:

Model No.	On sales to— Distributors	Dealers	Consumers
L-201 20 cu. ft.....	$248	$279	$495
L-201 stainless steel	290	348	580

Crating charges not to exceed $6 and actual freight charges may be added to the above prices, which are also subject to the firm's customary discounts and allowances.

Pig Iron Slash May Curb Output Of Condensing Units by 50%

WASHINGTON, D. C.—The government's program allocating and giving preference to the supply of pig iron to products used in Veterans' housing and in farm machinery may deal a body blow to production of refrigeration condensing units in the fourth quarter of this year.

One manufacturer who makes condensing units for all types of applications—from household refrigerators to large commercial machines —predicted that the shortage of pig iron for "non-priority products" might cut production of refrigerating machines 33% in September, and 50 to 60% in the final quarter of the year.

Here's how the situation hurts the condensing unit manufacturer. Pig iron is essential in the production of castings. One manufacturer may have patterns with 20 different foundries, to make various parts of his unit. (For example, patterns for compressor bodies, valve plates, flywheels, and a number of other parts in as many different foundries). Consequently, if any one of those foundries should be unable to supply castings, the refrigeration manufacturer's production would virtually close down.

Condensing unit manufacturers have made individual appeals to Washington officials, pointing out the essentiality of refrigeration, particularly in the preservation of foods, but have been given a "polite brushoff," to use the words of one of them.

The Malleable Iron Industry Advisory Committee, in its meeting last week, recommended that the Civilian Production Administration limit allocation of pig iron going into the manufacture of housing items to 25% of production in any one month or quarter. Production of many non-priority products is suffering so severely for lack of castings because of allocations of scarce pig iron to the production of housing items, farm machinery, and railroad brake shoes during this quarter that some plants are now closing down. More plants will be shut down in the fourth quarter, the committeemen declared, if requirements for certified pig iron for housing item production maintain the September rate.

The government's program that tends to keep castings from producers of refrigeration equipment has been taken in three main steps:

1. The permission for producers of "priority" items for the housing and farm machinery to certify their orders under Direction 13 to Order M-21, so that the foundries would have to fill all such orders first. This was to last through Sept. 30.

2. Direction 14 to Order M-21, which said that any of the certified orders not delivered before Oct. 1 would take on the status, during October, of CC preference rated orders.

3. Direction 18 to Priorities Regulation M-28, which grants CC ratings for a whole host of items for the housing program such as soil pipe, bathtubs, furnaces, low pressure boilers, lavatories, sinks, grilles, doorlocks, shelves, sash balances, screwed fittings, and a host of other items. Since foundries will probably have to give priority to orders from producers of such items, this last measure may possibly be the worst of all.

John C. Houston, Jr., Deputy Administrator of CPA, declared last week that he "hopes for greater production of pig iron in the fourth quarter, which would ease the very tight situation on malleable iron castings for producers of non-housing articles and also permit full production of critical housing items.

"Unless additional production is obtained," said Mr. Houston, "the housing needs cannot be fully met, and other industries will also suffer."

For the first six months of 1946 shipments of malleable iron castings averaged 56,000 net (short) tons a month, as compared with a goal of 90,000 net tons. This loss in production was due to shortages of pig iron, scrap and labor, and also to the steel and coal strikes.

However, neither government nor industry officials expressed a great deal of hope that production could be improved greatly in the fourth quar-

(Concluded on back page, Col. 2)

Public Hearings Set On Wisconsin Code

MADISON, Wis.—Public hearings on the proposed revision of Wisconsin's state refrigeration code of 1918 will be held in five Wisconsin cities beginning Sept. 19, according to the Industrial Commission of Wisconsin.

At these meetings those interested may present their arguments in person, but those unable to attend may submit written comments in advance directly to the commission.

Four Milwaukee men are serving on the five-man committee appointed to advise the Industrial Commission on the code revision. These are E. F. Vilter, who represents manufacturers of refrigerating machinery and the Wisconsin Manufacturers Association; R. H. Langer, representing users of refrigerating equipment and the Wisconsin State Association of the National Association of Power Engineers; J. V. O'Neill, representing insurance interests; George Sault, representing the Wisconsin State Federation of Labor. M. A. Edgar represents the Industrial Commission.

First public hearing is scheduled for Milwaukee, Sept. 19, in Room 409 of the Court House at 10 a.m. Additional hearings are planned as follows: Sept. 20, 10 a.m., Room 270, State Office Bldg., Madison; Sept. 23, 10 a.m., Supervisors Room, Court House, La Crosse; Sept. 25, 10 a.m., Supervisors Room, Court House, Superior; Sept. 27, 10 a.m., Supervisors Room, Court House, Green Bay.

The proposed revision to the code does not take in air conditioning, which is covered by the Industrial Commission's Heating, Ventilation, and Air Conditioning Code.

As it now stands, domestic type self-contained refrigerators not exceeding ½ ton capacity, and systems

(Concluded on back page, Col. 1)

RMA Launches Drive for Radio Price Decontrol

WASHINGTON, D. C.—Decontrol of OPA prices on radios by next December is the aim of a drive started by the Radio Manufacturers Association through three OPA industry advisory committees. In the meantime the radio group hopes to obtain as much price relief from the agency as possible.

These moves were revealed by R. C. Cosgrove, president of RMA, following an industry committee meeting with Ernest W. Heilmann, price chief in the OPA housewares and accessories branch.

The decontrol drive will work through the industry advisory committees on complete sets, tubes, and parts.

"We will exert every effort and tap all of the radio industry's resources in this fight to bring about decontrol of the industry through the processes provided by Congress

(Concluded on Page 4, Column 5)

New Refrigeration Motors

¼, ⅓ and ½ h.p. 110 volt single phase, 60 cycles in 500 to 1000 lots, delivery—August, September, October.

We want ¼ to 2 h.p. new condensing units, with or without motors, and other scarce commercial refrigeration items for our dealers and are not interested in selling motors for profit. Tell us what you have to offer, in exchange, regardless of quantity. State quantity, price and complete description and what size motors and quantity wanted.

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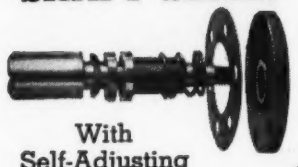
Specify **CHICAGO**

SHAFT SEALS **VALVE PLATES**



With Self-Adjusting Sleevelock.

Only Chicago valve plates have replaceable seats.

MODERN DESIGN

CHICAGO SEAL CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILL.

READY NOW!

The Temprite STORAGE WATER COOLER

NEW STAINLESS STEEL LONG-LIFE CONSTRUCTION

COMPLETELY NEW IN DESIGN

The water cooling and storage shell of the new Temprite direct expansion water cooler is constructed entirely *of 18-8 stainless steel.* All seams are atomic-hydrogen welded to insure strong, corrosion-free joints at all points coming in contact with water. Copper refrigeration coil is hot-tin bonded to the stainless-steel water shell, insuring maximum heat transfer.

Cooler can be operated with an automatic expansion valve, high-side float or a capillary tube and does not require an oil separator or equalizer tank. Easily adaptable to either new or rebuilt self-contained water coolers, dry-storage type beverage cabinets, small size restaurant installations, soda fountains requiring additional capacity or fruit drink dispensing cabinets. Competitively priced, this efficient, high capacity water cooler low-side is available for immediate shipment.

Specifications and prices available on request.

TEMPRITE PRODUCTS CORP.

Originators of Instantaneous 80° 40° *Liquid Cooling Devices*

43 PIQUETTE AVENUE DETROIT 2, MICHIGAN

Here Is Text of Order Boosting Prices Of Household Mechanical Refrigerators

PART 1380—HOUSE AND SERVICE INDUSTRY MACHINES
[MPR 598, Amdt. 22]
POSTWAR HOUSEHOLD MECHANICAL REFRIGERATORS

A statement of the considerations involved in the issuance of this amendment, issued simultaneously herewith, has been filed with the Division of the Federal Register.

Maximum Price Regulation No. 598 is amended in the following respects:

1. Section 3 (1) is revised to read as follows:

(1) "OPA industry price increase" means the increase in a manufacturer's ceiling price for sales of a particular model of refrigerator to a particular class of purchaser permitted by section 5 (b) and 5 (c) of this regulation.

2. A new section 5 (c) is added to read as follows:

(c) Additional industry reconversion adjustment of ceiling prices. Unless directed otherwise by an order issued by the Office of Price Administration under this regulation every manufacturer who, before August 1946 has established ceiling prices for his sales of the refrigerators he manufactures under any section of this regulation or an order thereunder, or who, after August 20, 1946 establishes his ceiling prices under sections 7, 9, or 10 of this regulation and adjusts them under section 5 (b), may increase his ceiling prices so established and adjusted by 3.5% of each price; exclusive of the Federal excise tax and any charges for delivery, installation and warranty.

3. Section 14 (a) is amended to read as follows:

(a) A distributor who has determined his ceiling prices before April 18, 1946 for sales of a particular model of refrigerator to a particular class of purchasing dealer either under an order issued under section 13 of this regulation or under the provisions of section 14 may increase those ceiling prices by the same percentage, applied to his ceiling prices exclusive of the Federal excise tax and charge for warranty, as the manufacturer's price to him is increased.

Section 14 (b) is amended by changing the date April 17, 1946 to read Aug. 20, 1946.

4. Section 15 is amended to read as follows:

Sec. 15. **Dealer's ceiling prices—(a) Prices set forth in section 24, Appendix A**—(1) Unless an order issued under paragraph (c) of this section specifies otherwise, a dealer's ceiling price in Zone 1 for a particular model of refrigerator sold by the manufacturer after Aug. 20, 1946 is the sum, rounded to the nearest 25 cents, of the following:

(i) The manufacturer's ceiling price, to distributors, f.o.b. factory, exclusive of the Federal excise tax and charge for warranty multiplied by the percentage gross margin between the manufacturer's March 31, 1946 ceiling price to distributors f.o.b. factory and the March 31, 1946 Zone 1 retail ceiling price, both amounts exclusive of Federal excise and warranty.

(ii) The amount of the Federal excise tax and the manufacturer's charge for warranty.

(2) For sales in zones other than Zone 1 the dealer may add the dollar-and-cents differential in effect on March 31, 1946 for sales in the particular zone.

(3) If the manufacturer had established on March 31, 1946 a ceiling price to distributors on the basis of a national delivered price, the retail ceiling price may be determined in accordance with paragraph (1) above by using the manufacturer's ceiling price on March 31, 1946 to distributors with freight prepaid in lieu of the ceiling price to distributors f.o.b. factory. If the retail ceiling price for a particular model of refrigerator was changed after March 31, 1946 and before April 18, 1946 only because the manufacturer obtained approval of a national delivered ceiling price in lieu of a f.o.b. factory price, the dealer's retail ceiling price may be determined in accordance with paragraph (1) above by substituting the manufacturer's delivered price to distributors as revised before April 18, 1946 in place of the manufacturer's ceiling price to distributors f.o.b. factory.

(b) **New or changed models priced after March 31, 1946.** The retail ceiling price for a new or changed model for which the ceiling price for sales by the manufacturer was established after March 31, 1946 is the manufacturer's ceiling price established on or after Aug. 21, 1946 to distributors, exclusive of Federal excise tax and charge for warranty marked up by the percentage gross margin between the manufacturer's March 31, 1946 ceiling price to distributors and the March 31, 1946 retail ceiling price; both prices exclusive of Federal excise tax and warranty, for the sale of the comparable model of refrigerator which was used by the manufacturer in establishing a price for the new or changed model. The manufacturer's March 31, 1946 ceiling price to distributors is the f.o.b. factory price, except that a delivered ceiling price to distributors may be used for computing the percentage gross margin if the manufacturer obtained, before April 18, 1946, approval of such a delivered price.

A dealer's retail ceiling price for sales of a particular model of refrigerator sold by the manufacturer prior to Aug. 21, 1946 is the price established prior to that date.

(c) Ceiling prices for dealers' sales of models for which ceiling prices have not already been established will be authorized by an order under this section. Ceiling prices so established will be fixed in line with the level of retail ceiling prices established under this regulation. No refrigerator may be sold at retail unless a retail ceiling price has been established for its sale under this section.

(d) **Credit charges.** (1) Dealers who during the period Oct. 1-15, 1941, collected a separately stated additional charge for the extension of credit on sales of refrigerators, may collect a charge for the extension of credit under this regulation, not exceeding such charge during the period Oct. 1-15, 1941, on a similar sale on similar terms to the same class of purchaser. Dealers who did not so state and collect an additional charge, may collect a charge for the extension of credit only on instalment plan sales; and the charge shall not exceed the separately stated additional charge for the extension of credit on a similar sale on similar terms of the same class of purchaser during the period Oct. 1-15, 1941, by the dealer's closest competitor who made a separately stated charge.

An instalment-plan sale as used in the above paragraph means a sale where the unpaid balance is to be paid in instalments over a period of either (i) six weeks or more from the date of sale in the case of weekly instalments, or (ii) eight weeks or more in the case of other than weekly instalments.

(2) All charges for the extension of credit shall be quoted and stated separately. Any charge which is not quoted and stated separately or which otherwise does not conform to this subparagraph, shall, for the purposes of this regulation, be considered to be part of the price charged for the refrigerator sold.

(3) No dealer may require as a condition of sale that the consumer must buy on credit.

This amendment shall become effective on the 21st day of August, 1946.

Issued this 19th day of August, 1946.

Paul A. Porter,
Administrator.

Pig Iron Distribution Hits Snag Under CPA Certification Program

CINCINNATI — The Civilian Production Administration's certification program, designed to help relieve the housing situation has completely disrupted the local pig iron distribution system, it was reported here.

Reports indicate that shipments under CPA's regulations to consumers in this district are not reaching their destinations with dispatch, particularly those coming from the south.

The greater part of southern production is being held in its home territory for consumption, according to reports.

Pig iron sellers believe that foundries in the non-priority class will run into supply difficulties in September. They noted that several foundries have already had to revise their operating schedules in order to keep in production.

Scarcity of foundry iron has resulted in a heavy demand for the high silicon grades, but the producers are unable to cope with the situation adequately because of limited production, it was said.

Victor Sales Partnership Changed to Corporation

PHILADELPHIA—To "secure the future of the business" which reportedly expanded to a marked degree during the past few years, the Victor Sales & Supply Co., refrigeration parts wholesaler, here has been changed from a partnership to a corporation.

Alex H. Holcombe, Jr., has been elected president of the firm; Terrence L. McLaughlin, vice president-sales manager; E. B. Holcombe, secretary-treasurer; and W. J. Boyd, assistant sales manager. These four, together with Alex H. Holcombe IV, constitute the Board of Directors.

No change in policy is contemplated, the company statement said. Additional storage space has been acquired for the firm.

It's a **REVELATION** *—that's all!*

★ Exclusive Dealer Franchise
★ Now in quantity production
★ All sizes: Industrial and Commercial
★ The last word in...

ELECTRIC WATER COOLERS

Revelation Company
Division of
Interstate Engineering Corporation
2600 Imperial Highway
El Segundo, California

OPA Assigns Prices on Reconditioned 1946 Boxes

WASHINGTON, D. C. — Reconditioned used 1946 model refrigerators may be resold at a ceiling price not to exceed 85% of the original ceiling price, OPA has ruled in Amendment 4 to RMPR 139.

Such refrigerators are to carry a 90-day guarantee, and the 85% is to be figured on the ceiling price applicable to the particular model at the time it was originally sold as a new model.

If the model is sold "as is," $3.50 must be deducted from its maximum price, but if it carries a guarantee of one year or more, $5 may be added to the maximum price.

In this same amendment, OPA also redesignated six paragraphs under Section 3 of the order.

Macy Features Freezer In Frostmaster System

NEW YORK CITY—A 3.2 cu. ft. Frostmaster home freezer retailing at $129.50 went on sale last week at R. H. Macy & Co. here as the first step in a program of department stores to promote the sale of home freezers and frozen foods.

The freezer was introduced by Frozen Foods Products, Inc., which has a tie-in with the Frozen Food Foundation, Inc. Both have been studying the merchandising plan for department stores.

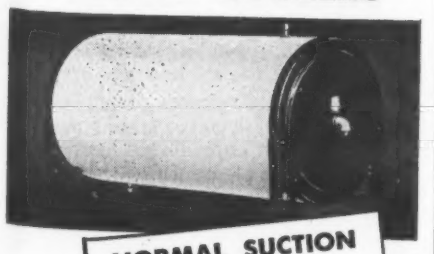
Immediate delivery is offered on the unit, which was designed by Walter Dorwin Teague. Shillito's and Rollman's in Cincinnati will be the next to offer the freezer, and it is expected that during the balance of the year some 30 department stores will start operations of the "Frostmaster System," including home delivery of frozen foods.

At present, the new freezer is being offered simply on a major appliance basis. Of table-top design, it is made of steel, but plans call for eventual production in aluminum. It measures 30 in. wide and is claimed to hold enough frozen food to feed a family of four for two weeks. With its work top, the freezer is intended to stay in the kitchen.

Selling outlets for its "Frostmaster System" will be established in every city with a population of more than 50,000 next year, according to plans of Frozen Food Products, Inc., which is moving into new offices here the first week of September. Some offices will be maintained in Syracuse, N. Y., where the company operated a pilot "system" during the war.

Besides the home freezer and the frozen food delivery plan, Frozen Food Products will make available to department stores storage rooms, refrigerated trucks, dispensing cabinets, and additional merchandising aids.

REMOTE WATER COOLERS



NORMAL SUCTION PRESSURE

For drinking water bubbler service, glass filler service, photographic developing, etc. Compact for floor, wall or ceiling installation. Capacities 6 to 25 gallons.

Also available now — cafeteria glass filler coolers, self-contained type bubbler coolers for offices, stores or factories. Write for latest data.

DAY & NIGHT
REFRIGERATION DIVISION
DAY & NIGHT MFG. CO.
One of the Dresser Industries
MONROVIA, CALIFORNIA
SOLD THROUGH REFRIGERATION WHOLESALERS AND DEALERS

Frozen Meal Output By Coast Restaurant Hits Half-Ton Daily

BERKELEY, Calif.—Half a ton of food a day is being processed by a local restaurateur, Lawrence W. Blake, who recently added a $35,000 frozen food plant to his restaurant at 2367 Telegraph Ave.

The equipment was made and installed by Refrigeration Engineers of Vallejo, Calif., and features General Electric germicidal lamps to kill bacteria.

Mr. Blake offers two types of precooked dinners—meat balls and spaghetti and a swiss steak complete with gravy, potatoes, and vegetables. The meals are frozen at -20° F. and kept at 0° F. They may be kept in a home refrigerator for at least four or five days, according to Mr. Blake.

The meals are merchandised through groceries and delicatessens with orders coming from Boston, New York, and Chicago.

Wholesale Grocery Plans Frozen Food Storage

SAN ANTONIO, Tex. — Refrigerated space in which six boxcars of frozen food can be stored will be among the modern features of the 65,000-sq. ft. Labatt Wholesale Grocery Co. warehouse started here recently. The building will have dock facilities at which seven cars can be unloaded simultaneously. The ceiling will have two levels, one 20 ft., the rest 16 ft. for storage of different types of foods. Completion of the building is expected sometime in January.

Rollins Refrigeration Razed by $50,000 Fire

MOKELUMNE HILL, Calif. — The John A. Rollins Refrigeration Co. and three adjoining buildings were destroyed by fire here recently leaving total damage estimated by John A. Rollins at $50,000.

With Proper Air Conditioning, That Hayfever Sneezing Can Be Stopped

CLEVELAND—Up to 99% of the air-borne pollens which cause hay fever and asthma can be effectively removed from air within the home through the use of proper air conditioning equipment.

Authority for that statement is the Indoor Comfort Educational Bureau of the National Warm Air Heating and Air Conditioning Association. This group recently experimented on 117 patients with skin test ratings positive to ragweed pollen protein, said to be the source of nearly 85% of the autumnal hay fever in the East and Middlewest.

During an aggregate of 483 nights the patients were confined to hospital wards where the incoming night air was thoroughly cleansed by an indoor comfort system. With the pollen removed from the atmosphere those formerly suffering from hay fever, or pollen asthma, manifested no symptoms of the malady whatever, the Bureau disclosed, so long as they were not again exposed.

Home owners are advised by the Bureau to keep doors and windows tightly closed during the summer months because of the fact that large quantities of pollen grains have been known to carry as far as 35 miles. An indoor comfort system should be utilized to filter all incoming air.

Universal Refrigeration Co. Will Build New Factory

INGLEWOOD, Calif.—A new one-story concrete and steel frame factory building will be erected at 440 North Eucalyptus St., here, by the Universal Refrigeration Co. for the manufacture of commercial-type refrigerators.

PRECISION MAKES PROFITS . . . When you sell Servel*

"SUPER-SMOOTH" PISTONS ASSURE EFFICIENT SERVICE

Even mechanics accustomed to working with the extremely close tolerances demanded by modern high-speed machinery are sometimes surprised by the "super-smoothness" of pistons for Servel condensing units.

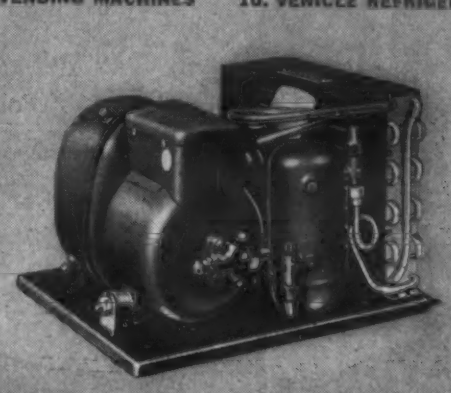
Machined by the most accurate and efficient centerless grinder available on the American market, these Servel pistons are not only absolutely free from taper, but they have a finish of from six to eight micro-inches RMS . . . which means their surfaces are smooth to within a few *millionths* of an inch!

Such "super-smooth" piston surfaces assure efficient lubrication, and are thus an additional guarantee of long years of dependable, trouble-free service from Servel units. They are indicative of the superlative care and precision in manufacture which have made Servel condensing units the standard of quality for twenty years.

"Servel Supermetic" is a new booklet describing units that will meet your condensing unit needs exactly. For your free copy, write today to Servel, Inc., Division RN, Evansville 20, Indiana.

*Servel's new "Supermetic" condensing units will serve dealers and fixture manufacturers in every vital field

1. STORE FIXTURES
2. MILK COOLERS
3. HOME LOCKERS
4. BEVERAGE COOLERS
5. VENDING MACHINES
6. ROOM COOLERS
7. FARM FREEZERS
8. WATER COOLERS
9. INDUSTRIAL COOLING
10. VEHICLE REFRIGERATION



Servel, Inc.
Electric Refrigeration Division, Evansville 20, Indiana

This is one in a series of advertisements featuring the scores of new machine tools and processes now being used to produce Servel Supermetics. Reprints are available to dealers individually or in sets as series progresses.

Now Ready..... THIS

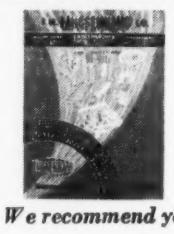
SENSATIONAL NEW DEVELOPMENT!

FREEZRLARM

Here's a NEW, effective way to render real SERVICE to every customer. FREEZRLARM is the exclusive, self-contained warning signal which sounds an alarm whenever temperature rises, from ANY cause. Not connected in ANY way with electrical system. EVERY OWNER OF FREEZER OR LOCKER PLANT NEEDS ONE. Write today for our liberal dealer proposition.

FREEZRLARM COMPANY

832 S. LUDLOW ST., DAYTON 2, OHIO



Langsenkamp Presents

1. OUR NEW 1946 REFRIGERATION CATALOG
2. OUR SOUTH BEND BRANCH IN THEIR OWN MODERN STRUCTURE AT 333 HYDRAULIC AVENUE

We recommend your examination of these two new additions to our 1946 program.

Indianapolis, Ind. South Bend, Ind.

F. H. LANGSENKAMP COMPANY

Louisville, Kentucky Evansville, Ind.

Honeywell provides the answer with the Polartron *System* of Automatic Defrosting Control. — Applicable to all "above freezing" fixtures the Polartron System provides for temperature "Cut-out" and Pressure "Cut-in" operation thus assuring positive defrosting at the end of each "on" cycle. Take advantage of the full capacity built into your refrigeration equipment — use the Polartron System. See your jobber for further details. Minneapolis-Honeywell Regulator Company 2659 Fourth Avenue South, Minneapolis 8, Minnesota. Branches and distributing offices in all principal cities.

MINNEAPOLIS Honeywell CONTROL SYSTEMS

The Polartron System of FROST-FREE REFRIGERATION

Burl Boykin Dies Of Heart Attack

BEAUMONT, Tex. — Burl Boykin, Jr., vice president and general manager of the Beaumont branch of Standard Brass & Mfg. Co. and active in the affairs of the Refrigeration Equipment Wholesalers Association, died suddenly of a heart attack while on a trip to New Orleans Aug. 24.

Mr. Boykin was educated at St. Edward's University, Notre Dame, and Oklahoma University, graduating in 1930. He first joined Standard Brass, refrigeration equipment and parts wholesaler, in 1937, at the company's branch in Port Arthur, Tex.

He leaves his wife, Elizabeth Hayes Boykin, and two children.

Earl Bedwin, President Of Travel Cold, Dies

GRAND RAPIDS, Mich.—Earl T. Bedwin, president of Travel Cold Co., manufacturer of refrigeration for house trailers, died here July 18, 1946, of heart disease. He was stricken while in his automobile.

Born in 1899 in Charlevoix, Mich., he organized the Travel Cold Co. six years ago. Prior to that time he had been employed for eight years by the Grand Rapids Cabinet Co. as a refrigeration engineer.

He leaves his wife, Bernice; a son, Robert; a daughter Betty; his mother, Mrs. Rose Bedwin; and a brother, Ray.

OPA Tells Procedure To Obtain Decontrol

WASHINGTON, D. C.—When petitioning the Office of Price Administration for decontrol of any commodity, an industry must assume the burden of proof that present supply of the commodity exceeds or is approximately in balance with demand, as required by the law.

The OPA laid down the above dictum in a regulation outlining the procedure to be followed in petitioning for decontrol.

It is not sufficient for an industry to attach to its petition a simple statement that supply and demand are in balance, OPA declared.

Acting through its industry advisory committee, an industry must prove that its products can be obtained at existing ceiling prices with the same facility and width of choice as in a typical prewar year, say 1941.

In addition, the industry must give the agency assurances that the conditions of supply and demand under review will continue to prevail, it was said.

Types of evidence suggested to prove the industry's case are: well grounded estimates of demand at all levels of distribution, industry surveys of current production made by trade groups or research organizations of a representative sample of firms, surveys of raw materials and labor supplies, and any other statistical information available.

When an industry committee has a petition for decontrol of any commodity to submit to the agency, it follows this procedure:

It files the petition with necessary evidence to the OPA in "proper form." If the petition is not in the proper form, the agency can reject the petition, causing the committee to file again.

Before 15 days have passed, OPA will give the committee its decision. If decontrol is refused, the committee may request a formal hearing. The hearing will be held within 10 days of the request, at which time industry members and consumer and labor groups will have an opportunity to testify.

The OPA will annouce its decision on the hearing within 15 days. If the answer is still "no," the committee can petition the decontrol board.

The OPA said that it has made no provisions for handling petitions for decontrol of a commodity on the basis that it is unimportant to business or living costs. The law requires that the OPA eliminate price ceilings on such commodities by Dec. 31, 1946. Until that time, however, discretion is left solely with the Price Administrator.

The agency said that it would handle petitions on these grounds after the deadline, but added that committees could submit beforehand informal advice on their views as to what commodities should be decontrolled.

10% Price Boost Given Warm Air Furnaces

WASHINGTON, D. C. — A 10% rise over the June 30 ceiling was authorized last week for warm air furnaces (24 in. and less) by the Office of Price Administration.

The new boost, which is in addition to a previous increase granted manufacturers of this type furnace April 19, 1946, brings prices to an average of 31.7% over those of March, 1942. Effective date of the 10% rise was Aug. 28, 1946.

Main factors prompting the most recent increase, OPA said, were advance in cost of materials such as pig iron, sheet steel, castings, motors, and controls since October, 1945, as well as wage boosts approved by the Wage Stabilization Board.

Authorization for the 10% rise came under Amendment 60 of Section 5.1 of Order 1 under MPR 591.

Institute Demands End of Regulation W

(Concluded from Page 1, Column 2)

the petition warns the Federal Reserve Board that any attempt to perpetuate such warborn credit restriction as a permanent part of our peacetime economy would be met by head-on opposition.

In addition to the restriction on veterans already mentioned, the petition gives the following reasons for repeal:

"In comparison with the inflationary pressures of the national debt, the huge bank deposits, and the expanded mortgage lending field, Regulation W is insignificant as an anti-inflation measure; and may have the opposite effect on encouraging purchasers to cash war bonds and to spend bank balances rather than to buy out of income.

"Regulation W is discriminatory in that it favors the cash purchaser over the less wealthy buyer who must pay out of income; it is undemocratic in that it supports the Marxian principle that the control of credit is essential to the socialized state; it leads to evasion and avoidance on the part of hard-pressed individuals, thereby weakening respect for public authority.

"Regulation W creates a needless expense on the part of thousands of financial institutions and tens of thousands of merchants throughout the country who must attempt to administer the multitude of rules, interpretations, and procedures prescribed by the regulation.

"In a period of peacetime reconversion, consumer credit must be permitted to assume its normal function in the creating of mass markets which will alone lead to mass production, mass distribution, full employment and a maximum national income.

In a discussion of the regulation appearing in the Institute's monthly publication, *Consumer Credit,* the Institute points to the results of a recent survey conducted by the Bureau of Agricultural Economics to substantiate its demands.

This survey, made at the request of the Federal Reserve Board, according to the Institute, showed that 10% of American families hold 60% of the savings and that half of this country's families hold only 3% of the savings.

Consumer Banking Institute describes itself as "a non-profit organization dedicated to the fullest possible development of sound consumer credit as an integral part of our national economy."

RMA Decontrol Drive--

(Concluded from Page 1, Column 4)

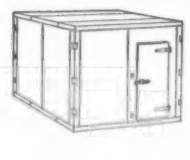
in the new OPA extension act," declared Mr. Cosgrove.

"Radio set production, by unit volume, is already greater than it was before the war, and it will probably increase this fall, as well as attain a better balance between the supply of consoles and table model receivers. We believe that the industry can make a strong case for decontrol at the earliest opportunity."

OPA officials have indicated that requests for decontrol will probably have to be considered individually for the three elements of the industry —sets, tubes, and parts, but it is understood that the radio industry hopes to combine these elements into a single drive.

The set committee, it was announced, also plans to seek price relief in the meantime through liberalization of the reconversion formula, particularly under the Barkley amendment of the new OPA law. The new law permits the use of a 1940 base in determining manufacturers' prices instead of the October, 1941, base which is currently being used.

BRIGHTEN YOUR FUTURE with FOGEL



THE COMPLETE LINE OF TIME-TESTED DEPENDABILITY

INTERESTING PROPOSITION TO QUALIFIED DISTRIBUTORS

A FEW TERRITORIES STILL AVAILABLE. INQUIRE TODAY!

FOGEL REFRIGERATOR COMPANY 5400 Eadom St., Philadelphia 37, Pa. Since 1899

Industrial Bankers Group Executive Asks End to Regulation W

CHICAGO—A plea for immediate abolition of the Federal Reserve Board's Regulation W control of consumer credit was sounded here recently by Myron R. Bone, executive vice president of the American Industrial Bankers Association.

"There is nothing in the Federal Reserve Board's own figures," Bone asserted, "to support the board's contention that consumer credit is, or ever has been, of sufficient volume to exert even a minor influence on the total business picture or on either inflation or depression.

"While it is a known fact that the volume of consumer credit follows the business cycle, no sound evidence has ever been produced to indicate that it causes the cycles to rise or fall. Consumer credit expands or contracts with general business because people who use it naturally tend to go more deeply into debt when the prospects of paying their obligations are best and stay out of debt, so nearly as they can, when the outlook is good for prompt liquidation."

Contending that consumer credit never has been large enough in volume to swing the business cycle or to have any noticeable effect on general prices, Bone said that in 1941, when consumer credit reached a record high, it amounted to one-third of outstanding commercial bank loans and only two-and-a-half times all personal taxes and less than half of personal and business taxes.

"Any inflationary influence could be marked by comparing the trends of consumer credit with those of the index of the cost of living," Bone said. "In 1933 both the volume of consumer credit and the cost-of-living index were at a low point. Thereafter consumer credit increased even more rapidly than the index of total production, but the cost of living remained relatively stable from 1935 to 1940."

Although the volume of consumer credit fell after 1941, Bone continued, the cost of living turned sharply upward, and after 1943 credit increased at a rapid rate, but the cost of living leveled off.

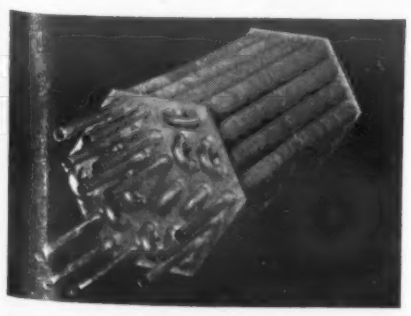
3rd Factory Acquired By Penn Switch Co.

INDIANAPOLIS — Bringing the company's total to three factories, a new factory building here has been leased by Penn Electric Switch Co. of Goshen, Ind. in the company's expansion program intended to speed deliveries, announces Albert Penn, president. On Jan. 1 of this year Penn started operations in its second factory, located in Toronto.

Production in the new Indianapolis plant is expected to begin shortly after Oct. 1 and will include some of the present line of controls and new products recently developed. Penn produces automatic controls for refrigeration, air conditioning, heating, pump, and air compressor applications, in addition to safety controls for internal combustion engines.

ROME-CONDENSER

★ **Jointless Type** ★



Rome Water Cooled Condenser Coils insure trouble-free condensing equipment. Used by leading compressor manufacturers.

ROME-TURNEY RADIATOR COMPANY

222 CANAL ST.
ROME, N. Y.

Veterans' Complaints Cause U.S. to Probe Refrigeration Dept. of Chicago School

CHICAGO—Complaints by veterans that the refrigeration department of a trade school here in which they are enrolled under the GI Bill of Rights lacks adequate facilities has led to an investigation by the Veterans Administration.

Twenty-five veterans out of a class of 80 refrigeration students told the VA the school had insufficient equipment, text books, and supplies. They also charged that instructors often failed to appear for classes.

The school's registrar denied that equipment was inadequate and claimed instructors were registered by the state. He blamed admitted scarcity of books on unfilled orders.

If the veterans' criticisms are substantiated, a VA official said, the ex-GI's will be removed from the school. The VA would then request the Office of the Superintendent of Public Instruction to make a formal investigation to determine whether the school should be stricken from the approved list.

One of the refrigeration students was said to have observed that he spent all one morning reading a newspaper "because our instructor was busy with something else."

In addition to teaching refrigeration, the school has classes in auto mechanics, Diesel mechanics, and welding. According to the registrar, 505 veterans were taking the four courses under the GI bill.

The registrar offered these statistics: only about 10% leave the school—some because of sickness, some because they move out of the city, and some because they change courses; about 70% really want to learn a trade, while 30% are "gold bricks" who don't want to learn.

Letters of eligibility will be returned to dissatisfied veterans upon request so they may enroll in some other school, the registrar said.

Zoll Elected President Of Chicago-Wilcox Mfg. Co.

CHICAGO—Erle J. Zoll, who has handled sales for the Chicago-Wilcox Mfg. Co., gasket manufacturer here, for the past 29 years, has been elected president of the firm.

In addition to his new duties, he will continue in charge of sales, according to the company announcement.

Other officers of the corporation include R. B. Anthony, chairman of the board; H. B. O'Brien, secretary; and R. B. Anthony, Jr., treasurer.

Convention Site Chosen

BERKELEY, Calif. — St. Louis' Hotel Jefferson has been selected as the scene of the annual meetings of The Refrigeration Research Foundation and the National Association of Refrigerated Warehouses, set for mid-March, 1947, according to TRRF's August bulletin.

TRRF's sessions will begin March 18. NARW will start its meetings the following day.

All Phillips 66 Stations To Sell Home Appliances

SPRINGFIELD, Ill.—With 100 of its service stations in its midwest district already retailing appliances, Phillips Petroleum Co. has announced that all its stations will carry this merchandise as soon as it becomes available.

In the 100 stations of Phillips 66 Co. in Illinois and four other states where these lines have been added, both major and small appliances are now being sold, along with radios, household cleaning and polishing agents, and insect sprays. Formerly the stations sold only petroleum products and services.

In some instances the service stations have been enlarged to accommodate the new stock. Display windows have been built into the older stations.

Recently the company featured the appliances it is handling at an exhibit in the Illinois State Fair. Included were national brands, while a home freezer and three models of radios carried the "Woolaroc" trade name.

THE RIGHT EXPANSION VALVE FOR THE JOB

You Will Find It In The

"DETROIT" LINE

NO. 793 DIFFERENTIAL TEMPERATURE EXPANSION VALVE
Specially designed for low temperature applications below MINUS 30 deg F.

NO. 899 DURA-FRAM THERMOSTATIC EXPANSION VALVE
Furnished with or without external equalizer. For medium size commercial or air conditioning applications. Capacity 1.6 to 6 tons Freon-12 or Sulphur—3 to 11 tons Methyl.

NO. 673 THERMOSTATIC EXPANSION VALVE
For average size commercial or air conditioning applications. Orifice sizes 3/64" to 7/32" with capacities up to 3½ tons Freon-12 or Sulphur and 6 tons Methyl.

Demands on expansion valves vary widely. Capacities, suction temperatures, condensing temperatures, refrigerants, types of service, etc., produce countless combinations. No one valve will satisfy all these conditions. The "Detroit" No. 673 successfully meets the requirements of most commercial installations, and is "the standard of the refrigeration industry."

The "Detroit" line includes a large number of valves of different capacities and characteristics, because only in this way can every refrigeration condition be met. The line includes, for example, a special valve used only for temperatures from below minus 30 deg F down to minus 120 deg F. Ordinary expansion valves are entirely unsatisfactory in such ranges. Also, we offer valves especially recommended for the high ranges encountered in comfort air conditioning. Between these extremes are found the big bulk of refrigeration installations—commercial, industrial, etc. But conditions encountered here vary widely, so a number of valves are offered.

Of course, we are not telling the refrigeration man anything new when we say that selection of the proper valve for the job is of prime importance in the success of the job. Ordinarily, his experience will tell him what valve to use. But jobs turn up continually which do not conform to regular experience.

In such cases it is worth while to make use of Detroit's very large collective refrigeration engineering experience. We have been designing and making valves for many years and have, at some time, encountered about everything refrigeration has to offer. This collective experience is available to you through your wholesaler. If he hasn't the answer in his own experience, or in his files, he can get it for you. 2165

DETROIT LUBRICATOR COMPANY

"DETROIT"

General Offices: 5800 TRUMBULL AVENUE, DETROIT 8, MICHIGAN
Division of American Radiator & Standard Sanitary Corporation
Canadian Representatives — RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

Districts on Coast Show Largest Gains In Geographical Study of York Shipments To Distributors During Past 5 Years

YORK, Pa.—Shipments and billings of refrigeration and air conditioning equipment to distributors in its nine districts, excluding Chicago, during the first nine months of its fiscal year beginning Oct. 1, 1945, have been more than double the corresponding period in the banner prewar year of 1940-41, York Corp. here reveals.

Using the 1940-41 figures as 100%, the average actual gain in the current period is 227.5%. The present volume is also two and three-quarters times that of the corresponding nine-month period in 1944-45, York said.

Impact of the war on the industry is readily apparent in the York figures. Using 1940-41 figures as 100%, average shipments slowed to 78.6% in 1941-42, and then sloughed off to 40.4% in 1942-43 and 44.1% in 1943-44. A sharp recovery is denoted in 1944-45 figures, when York shipments rose to 80% of the 1940-41 base period.

Covered in the study are the York districts of Boston, New York City, Philadelphia, Cleveland, Atlanta, St. Louis, Houston, Los Angeles, and Seattle. The Seattle district figure for the current year represents the largest gain over the prewar base period—425%. Last year Boston led the districts in gaining over the base period shipments and billings by 234%.

Below in tabular form are the results of this York study:

Shipments to York Corp. Districts over 9-Month Periods (Banner Fiscal Year of 1940-41 Used as Base Period)

District	1940-1941	1941-1942	1942-1943	1943-1944	1944-1945	1945-1946
Boston	100.0	73.0	20.3	40.8	234.0	288.0
New York	100.0	94.5	38.7	42.6	74.8	223.0
Philadelphia	100.0	71.1	14.5	30.4	59.5	170.0
Cleveland	100.0	81.3	22.4	22.3	50.6	193.5
Atlanta	100.0	83.2	51.5	39.8	84.2	292.2
St. Louis	100.0	81.3	70.5	81.5	110.0	235.5
Houston	100.0	76.5	81.0	41.8	64.2	259.0
Los Angeles	100.0	71.3	69.2	95.2	122.0	307.0
Seattle	100.0	69.7	27.5	44.2	100.5	425.0
Total*	**100.0**	**78.6**	**40.4**	**44.1**	**80.0**	**227.5**

*Excluding Chicago.

'Sensationalism' In Promotion & Special Display Case Jump Sales of Frozen Foods Over 60% for This Market

ST. LOUIS—Packaged frozen foods sales have jumped more than 60% at Schenberg's market here since the management launched a selling program around them.

Frozen foods sales volume now averages between $450 and $500 a week, according to Charles Stewart, manager of the frozen foods department. This excellent turnover, all accomplished during the past three months, he credits to "pure sensationalism" in promotion, backed up with a custom-built display case set up just inside the front door of the store.

Schenbergs formerly carried all frozen foods in a standard, lid-type freezer, and did little or nothing in a promotional way to get frozen food users started. However, experience during the rationing of canned foods and general shortages in produce, meats, fish, etc., has convinced owner Harry Schenberg that "the time has come to make the most of frozen foods."

Therefore, this leading South St. Louis super-market has made the selling of frozen foods a major enterprise, instead of a "sideline." The campaign rests on three basic points, which are the new refrigerator, "barker" promotion by stentorian-voiced employes, and one of the largest displays in the city.

Outstanding is the two-section display refrigerator. This is completely open. The unit consists of two coil-refrigerated bins, each 6 feet long by 3 feet deep, in which 20 cases of frozen foods may be easily accommodated. There is no lid whatsoever, the space above and behind the frozen food display being made up of a white porcelain sign panel on which frozen foods are listed by price and manufacturer.

Built around this twin custom-built open display case for frozen foods a promotional program of "pure sensationalism" has boosted frozen food sales for Schenberg's market in St. Louis. One of the manager's tricks is to mix up the frozen food packages. He claims he sells more this way. Another stunt is the employment of a "barker" who really attracts shoppers' attention.

Both bins are packed 3 feet deep and frozen foods are partitioned off by means of six sets of coils, spaced a foot part, down the length of the box. These run all the way to the top of the 3-foot-deep display, and keep the top frozen food package as well refrigerated as those on the bottom.

Contiguously with setting up the new boxes, Mr. Stewart adopted a policy of "mixing up" brands, types, and specials in frozen foods. Therefore, there is no such thing as a fish section, fruit section, vegetable section, etc. Instead, frozen chicken a la king may appear side by side with frozen lima beans, fish fillets, or pre-cooked vegetable stew.

"The customer sees more, handles more packages, and invariably buys more," Mr. Stewart grinned. "Therefore, we are never going to classify frozen foods into types again—we'll sell more this way."

The huge case is kept stocked by three St. Louis frozen foods distributors, each of whom makes two weekly deliveries. In addition, Schenbergs frequently sends out an "emergency call" for additional deliveries sent over in a panel truck. Eventually, Schenbergs hopes to maintain storage space for weekly consignments of frozen foods, but has left this far in the future.

The frozen foods counter is the first thing any entering customer sees. Passing through two turnstiles in front, she comes face to face with the frozen foods box, and a huge blue and white swinging sign overhead which reads simply: "Frozen Foods."

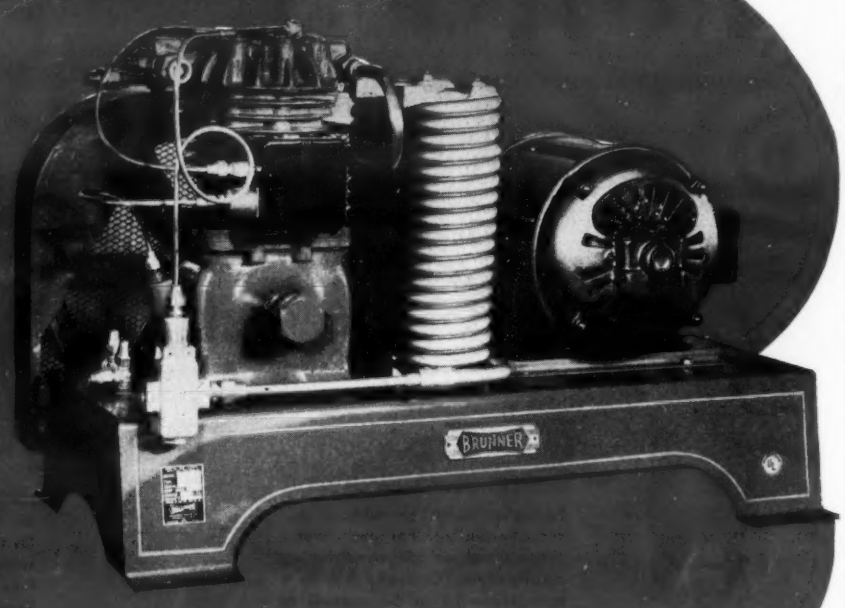
If, for any reason, however, the customer ignores the display, Schenbergs has seen to it that she will think of frozen foods immediately. On duty for this purpose is a "barker," whose job it is to sing out popular frozen foods in stock, and their prices—just as do other barkers in the fruit department, produce department, meat market, etc.

Schenbergs is one of the few major stores in St. Louis to still use this "old fashioned" huckster system of crying the store's wares—but in the case of frozen foods, it has proven ideal. Many women in search of lima beans, for example, and finding none in the canned form, are quick to react when they hear the barker sing out "Fresh California lima beans, 25 cents."

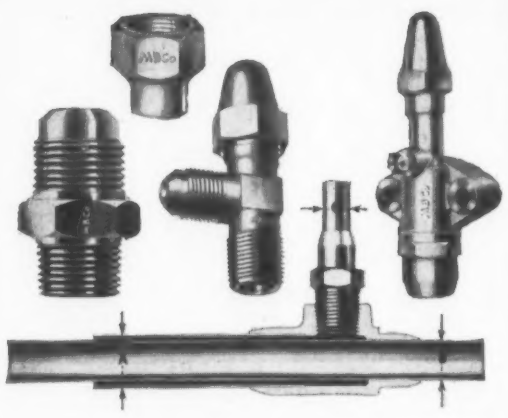
Every employe in the store is instructed to suggest the frozen foods case to his customers—and they do, with surprising results.

Centering a large workingman-income area, Schenbergs does not cater to the type of "deluxe customer" usually attracted by frozen foods—but by use of the open case, loudly informing the customer of frozen foods in stock, and close cooperation with suppliers, the store expects to hit $600 a week or better in the near future.

BRUNNER USES MUELLER BRASS CO. PARTS IN THEIR CONDENSING UNITS



BRUNNER MANUFACTURING COMPANY
General Offices and Factory: Utica 1, New York



BUILT-IN QUALITY . .
TIME-TESTED PERFORMANCE

Mueller Brass Co. Valves, Fittings and Accessories for mechanical refrigeration have a well-earned reputation for built-in quality and time-tested performance. They are manufactured specifically for mechanical refrigeration work. THEY ARE USED BY ALL OF THE LARGEST MANUFACTURERS THROUGHOUT THE UNITED STATES. Mueller Brass Co. products must be good!

THESE PRODUCTS MUST BE GOOD!

No name in refrigeration is more highly respected than Brunner. In fact, the name Brunner on a condensing unit is symbolic of the highest standards of manufacture measured in terms of materials used, precision assembly and technical developments. For example, valves, coils, bearings and other fittings are of brass or bronze—nothing short of the finest metal for any specific part would do. This accounts for the additional fact that Brunner maintenance and replacement parts costs are negligible — that Brunner units render continuous service at full ratings for many, many years.

Illustrated on the left hand side of this page, are some of the valves and fittings manufactured by the Mueller Brass Co. of Port Huron, Michigan, that are used in the Condensing Unit shown above.

We, at Mueller Brass Co. are proud of our contributions to the dependability and operating efficiency of Brunner Condensing Units.

MUELLER BRASS CO.
PORT HURON, MICHIGAN

STANGARD
Prime Surface
COLD PLATES
For Maximum Refrigerating Efficiency

THE STANGARD-DICKERSON CORPORATION
46-76 Oliver Street • Newark 5, N. J.
STANGARD KNOWS REFRIGERATION

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INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

Sonny gets his new bicycle, with the siren and tail-lamp.

Bango! You look at your bank-balance, and it's all gone.

So after you cash in your War Bonds to take the family to Yellowstone National Park, you're back where you started—in the red.

Where's that new home? How about air conditioning? Can Mother have that dishwasher?

Your house needs painting. That's for sure.

The Church—and worthy charities—are pressing their needs.

What happens to your savings then?

You'll Have to SELL Again

Brother, the Buyer's Market will be upon us before we know it.

Early in 1947, Ma and Pa may run out of superfluous cash.

And then you'll have to *sell* every salable item you can.

You'll have to compete with other eager salesmen for the consumers' hard-won dollars, too.

That "boom" you've counted on may have spent its force.

We're Yearning for Friends

But don't be discouraged.

You can get the jump on your competitors by offering *personal service,* and by extending friendliness *with a smile.*

During the last four years most of us have become lonely.

Our butcher has snarled at us. The filling-station attendant has ignored his signaling bell.

We've walked into department stores, and the girl-clerks have turned their backs on us.

We yearn for attention, and friendliness.

Be a Home Consultant

Brother, this is where you rise and shine.

Be friendly. Seem eager. Welcome your customers.

If they needle you, relax! Tell them a good joke. Go out of your way to be pleasant.

It will pay.

Give extraordinary service. Be especially friendly. Cultivate long-term contacts.

Clothing merchants used to give a new baseball-and-bat to all purchasers of new suits. They wanted those boys to become lifetime customers!

It's time we returned to that time-honored Principle:

If you *want* something from people, you must *give* them something.

Unexpected Dividend

As longtime subscribers of the NEWS will recall, "Dope" toured the world in search of data on export markets for refrigeration and air conditioning shortly before the last war broke out.

One of the grand things about that trip was that we were met everywhere by friends—substantial businessmen who had been subscribing to the NEWS for years, men who took us into their homes, and opened up with valuable capsule-digest information which was the result of many years of observation on their part.

That was all to the good.

But an unexpected dividend of that trip was the fact that dozens of these men would eventually visit the United States, and would come to Detroit to spend some time with us discussing the future of their countries *vis-a-vis* the American refrigeration and air conditioning industry.

So AIR CONDITIONING & REFRIGERATION NEWS has always paid especial attention to world trade.

Because the following thoughts on the current state of affairs in foreign marketing demand the interest of every American, we commend them to your attention.

Well-Reasoned Rebuttal

Included in the "Proposals for Expansion of World Trade and Employment," issued by the State Department for consideration of the International Conference on Trade, is the following statement:

"The production of, and trade in, primary commodities is exposed to certain difficulties different in character from those which generally exist in the case of manufactured goods. . . ."

In answer to this view, exporters argue that the continuation of commodity agreements can only foster state trading companies—if the pacts are to be carried out properly. This subtle agreement would eventually eliminate private trading, they contend. Even the king-pins who are still attached to the Crown of the Netherlands have approved this type of program, they say.

August Maffry, the first vice president of the Export-Import Bank, recently laid the blame for the sorry condition of state trading on the universal lack of adequate foreign exchange and the general disorder of the world's economy. As he put it, "purchasing missions are merely a symptom, not the disease."

"Even those European governments which are most eager to see their countries' foreign trade move back toward normal are handicapped by the disorganized conditions left in the wake of the war—the destruction of productive facilities, the exhaustion of supplies, the disruption of transport and distribution channels, the scrambled ownership in industry, the inadequacy of foreign-exchange assets, the internal financial confusion, and often also the unsettled status of the governmental regime itself.

"These conditions are not equally serious in all these countries but, in practically all that had been directly involved in the war, a large measure of governmental control and even direct official intervention in foreign-trade arrangements have seemed unavoidable, at least for a time."

And so, nine months after the end of the war, exporters are still wondering: How long is this confused, obfuscatory situation going to continue? How sincere are the "assurances" of foreign nations that they favor trade by private enterprise? What is the solution?

Nobody Wins a Strike

The cost of a strike to the workers is effectively described in the official Monthly Survey published by the American Federation of Labor.

It points out that if workers earning $1 an hour are offered an increase of 12 cents by their employer, but go on strike and stay out for eight weeks in order to obtain an increase of 18 cents, they will lose $358 in pay (eight weeks of 40 hours at $1.12); and that the 6-cent increase obtained by the strike will not repay this loss for nearly three years.

If the strike obtains only three cents more than the employer offers, nearly six years will be required to make up for the loss.

Moreover, the A.F. of L. publication notes:

"If the extra three cents or six cents breaks a price ceiling, workers may take losses they can never regain.

"For every family with savings or life insurance, each dollar will be reduced to 95 cents or 92 cents in buying power."

QUICFREZ Model No. 1245 12.5 Cu. Ft. with Separate Freezing Compartment and Divided Storage

SANITARY Quicfrez FARM LOCKER PLANT FOND DU LAC, WIS., U. S. A.

SINCE 1939...

With a long experience background in the building of Farm Locker Plants, SANITARY's specialized skill and know-how in this field insure utmost customer satisfaction.

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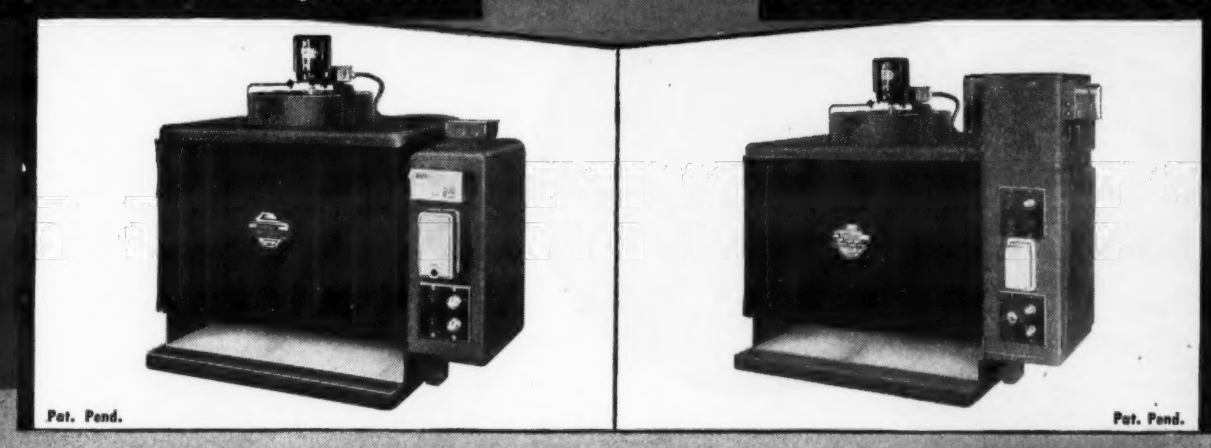
HERE'S AMCOILS TWO-FOLD ANSWER TO FOOD CONDITIONING AND FREEZING

AMCOIL DELUXE FOOD CONDITIONER
Cools without Dehydration

AMCOIL ZERO BREEZE LOW TEMP UNIT
Defrosts without Defreezing



Pat. Pend. Pat. Pend.

Only an Amcoil Deluxe Food Conditioner can do this *double job* — cooling and preventing dehydration at the same time. EXTRA FEATURES for complete automatic control, it maintains high humidities (up to 85%), while cooling down to 36° F This double-duty performance not only preserves but insures a minimum waste from trimming and a maximum retention of natural bloom and freshness of meats, or on *any* products where dehydration is a factor. It sells itself because it pays for itself.

Also available now is the Utility Food Conditioner, designed to meet the need for a moderately priced unit for cooling and preventing dehydration.

Investigate these profit makers today. Send for bulletin FC (Deluxe) and UDF (Utility) NOW!

The Amcoil Zero Breeze Low Temperature unit has a built-in device to assure automatic defrosting of the cooling coil during each refrigeration off cycle. It's something new for better preservation and storage of frozen food products at temperatures between +20°F and −20° F It has three controls: (1) manual defrost, (2) semi-automatic defrost, or (3) fully automatic defrost.

For best results from this completely modern automatic, Zero Breeze low-temp unit, be sure you have an experienced *low temperature* installation man. The AMCOIL Engineering Department will make recommendations for your type of application on request.

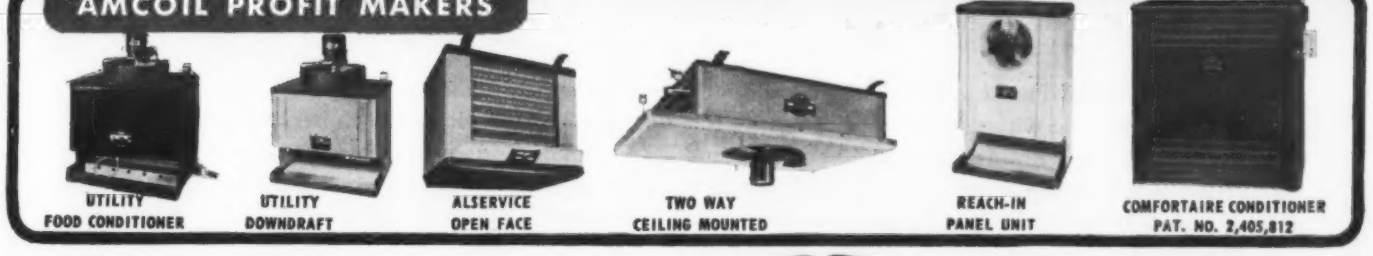
COMING SOON AMCOIL DISPLAY CASE FOOD CONDITIONER

Especially designed for efficient cooling and *preventing dehydration at temperatures down to 36° F.* in all kinds of display cases. This unit can be easily installed without remodeling case.

AMCOIL SURFACE PAT. #2,402,262

DEALERS JOBBERS STOCK THIS COMPLETE LINE ACT TODAY

OTHER FAST MOVING AMCOIL PROFIT MAKERS



UTILITY FOOD CONDITIONER — UTILITY DOWNDRAFT — ALSERVICE OPEN FACE — TWO WAY CEILING MOUNTED — REACH-IN PANEL UNIT — COMFORTAIRE CONDITIONER PAT. NO. 2,405,812

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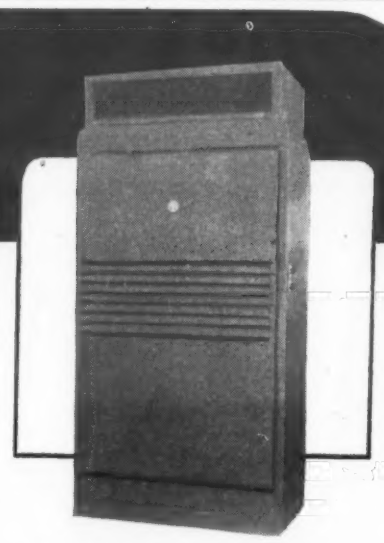

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All-purpose, handsomely designed, smooth functioning air conditioning units with all copper condenser and liberally designed coils—removable outlet box for use with duct system—removable panel in back of outlet box for additional grills where front and back air distribution is desired in center of room . . . two way adjustable deflecting grill . . . knock-out for fresh air connection . . . removable one-piece panel in front for easy accessibility. The cabinets are made of furniture steel . . . crackle finish. **Also available with one or two row heating coil.**

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PROP-R-TEMP *Self-Contained Air Conditioning Units, 3 and 5 Tons.*
TYPHOON LOW-SIDES, *3 and 5 Ton Units*
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AMERICAN'S NEW
5-Ton Gasoline Powered, Automatic Controlled Refrigeration Unit for Trailers

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Actual Hauling of Perishable and Frozen Foods Give This Unit an Exceptional Test Record

NOW READY
To Mount on Your Trailer Regardless of Make

TERRIFIC DEMAND
If you are contemplating low temperature hauling with your reefer, get in touch with our sales department immediately for details and price.

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Modern Home Laundry Affords Greater Adaptability as a Planned Work-Center

Compact Unit Can Be Installed on Any Floor

Editor's note: Retained by Bendix Home Appliances, Inc., to design laundry layouts for its Consumer Laundry Planning Book and the Architects and Builders Handbook, Mr. Yost is an architect widely known for his straight-forward modern design. He is vice president of the Chicago chapter, American Institute of Architects. His articles on domestic architecture have appeared in various national publications.

By L. Morgan Yost, A.I.A.

Laundry planning for utmost usability is coming into its own.

Development of wonderfully efficient automatic washers, dryers and ironers, plus improvements in cabinets, hampers, flooring and the extra attention given to pleasant surroundings, have transformed the laundry into one of the most pleasant rooms in the house.

Efficient planning comes into the picture wherever modern laundry appliances are used. The laundry—whether on the first floor, the second floor or the basement—is planned just like a factory. Soiled clothes and linen come in one end and pass through the production line, coming out the other end, fresh, clean and ready for use.

This planning saves many hours and steps for the housewife.

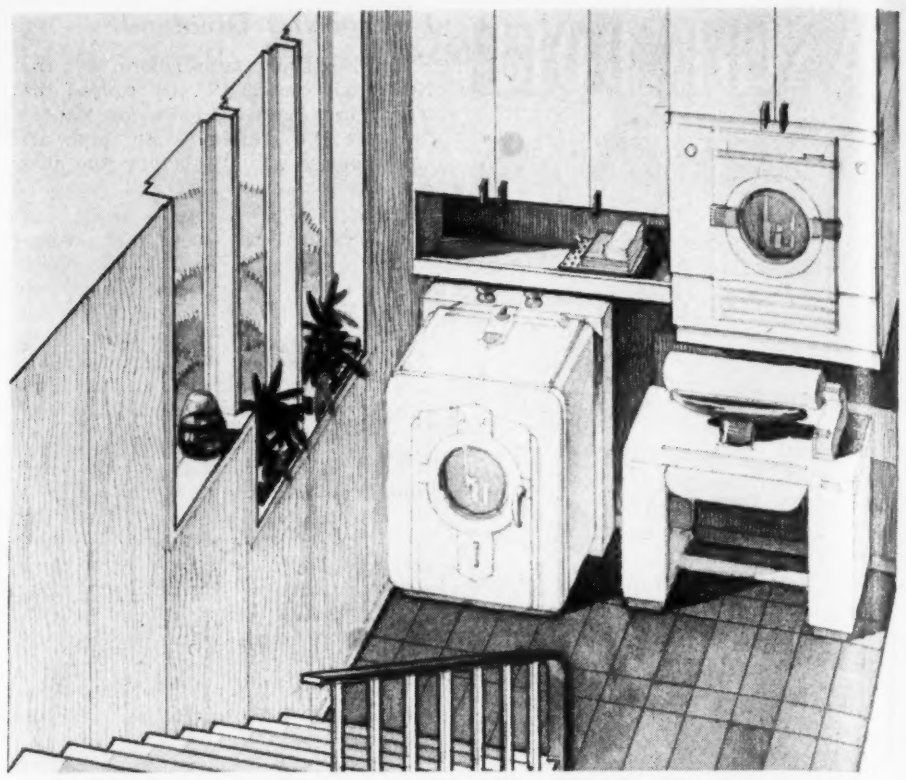
Not only has the arrangement of the laundry equipment been restudied, but even the location of the laundry.

Why indeed is it necessary to keep a laundry in the basement? Why not let it have all the light, air and convenience that any other workroom should have? Why not even combine it with another work space already in the house, such as the kitchen, a sewing hoom, a recreation room or a workshop?

Perhaps the most popular laundry will be in conjunction with the kitchen. This is the work center of the home, and with the automatic laundry equipment it is easy for the housewife to do other work in the kitchen at the same time that laundry is being done automatically for her.

This convenient location makes it unnecessary for her to run up and down stairs in caring for other household duties. She is convenient to the telephone and handy to the doorbell. Her children can come and go and play under her supervision. Think of the steps this saves.

Perhaps a practical location of the laundry, in the larger home, would be on the second floor, where most of it will work out best.



This architect's drawing shows a basement home laundry installation that arranges the washer, ironer, dryer, and storage cabinets in 24 sq. ft. and yet provides ample window space with its natural light and fresh air.

A laundry on the second floor could be back to back with the bathroom for economy of plumbing, and the production line arrangement of appliances could be worked out best to suit the arrangement of the house. The clothes hamper could have two doors, one on the hall side, the other opening into the laundry.

From there the clothes would be placed in the washer, then in the dryer. Sewing equipment, including a sewing machine, would be close at hand. In fact, this would be the sewing room as well as the laundry.

This laundry sewing room might open conveniently on the deck where certain items such as woolens could be dried or aired. The wall between the laundry and the hall would merely be a two-sided linen case so the ironed linen could be placed on the shelves from the laundry side and then taken from the hall side when they are to be used.

The neatness and beauty of modern laundry equipment makes its location quite feasible in a recreation room, where it need not be hidden because it actually becomes part of the decoration of the room.

More and more of our houses will be without basements because basement space has not proved to be practical for work, storage or play. Often, therefore, the heating plant is located on the first floor in a utility room. This utility room could be expanded somewhat to include the laundry, if it were not desired to place it in conjunction with the kitchen.

In existing houses and even in some new ones it may be desirable to keep the laundry in its traditional location in the basement. Even so, the new laundry room will be a far cry from the old makeshift laundry. It too will take advantage of the modern equipment and of proper planning, color schemes and ventilation to make the room attractive and pleasant.

the laundry originates anyway. Formerly it was essential that the laundry be in the basement because washing clothes was a wet and sloppy process. This no longer is true, and the laundry may be placed wherever

Many homes will be built and sold complete with laundry equipment. New changes in home mortgage laws make it possible to include the laundry equipment in the construction loan over the same long term and at the same favorable rate as the home mortgage.

This not only makes it easier to own efficient laundry equipment but possible to design the equipment as part of the home and make provision for it as the house is built. More efficient arrangement and economical installation result.

In building, therefore, it is most important to include the laundry equipment in the "must" list rather than to rely on luck that you will be able to install the equipment after the house is built. Certain space requirements, electric wiring and plumbing pipes must be installed as the house is built to avoid costly alterations later. Usually these considerations, carefully planned before the house is built, require no extra outlay.

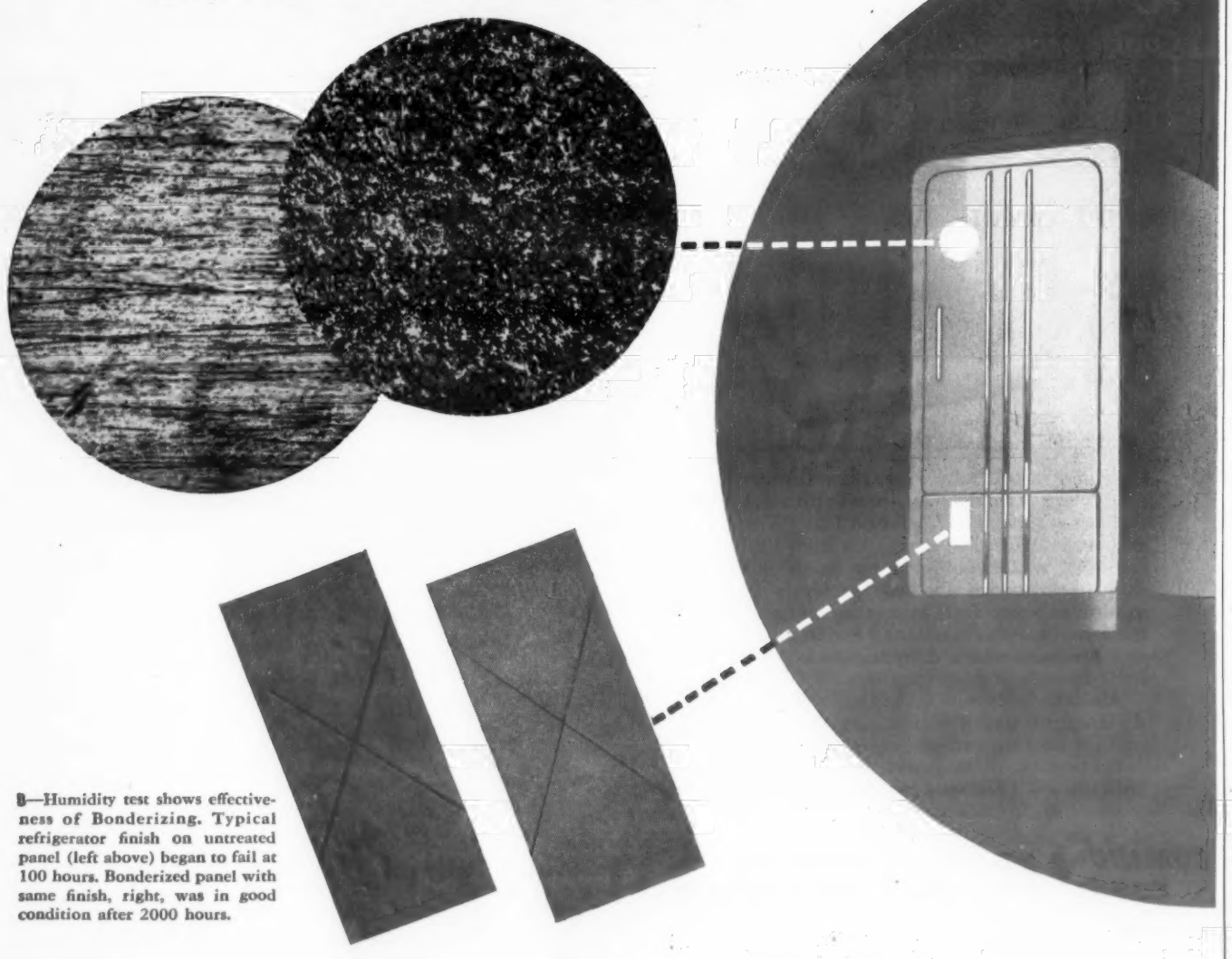
It is the aim of architects and manufacturers to make the house as easy to live in as possible. The house is no longer the empty shell that it was years ago. This means that the foresight you will spend in having your home designed will be well repaid in ease of maintenance and in extra leisure time for the family. The drudgery of the old-time laundry in a deep, damp, dark basement need no longer be a part of your scheme of life.

Wilkes-Barre Dealers Set Up Appliance Association

WILKES-BARRE, Pa.—The Wyoming Valley Appliance Association has been organized to further goodwill and foster improved business ethics among appliance dealers of this section. Officers are: President, Harry Haycox, the Lazarus Store; vice president, David Schooley, the Boston Store; and secretary-treasurer, Gustav Newburger.

WHY *Bonderized* FINISHES *look better longer*

A—Photomicrographs, 100 times enlarged, tell the surface story! Left, plain steel. It's glossy smooth, has no satisfactory foothold for finish. Right, Bonderized steel has crystalline structure that anchors paint to metal.



B—Humidity test shows effectiveness of Bonderizing. Typical refrigerator finish on untreated panel (left above) began to fail at 100 hours. Bonderized panel with same finish, right, was in good condition after 2000 hours.

Bonderizing ANCHORS PAINT TIGHTLY TO METAL

When a manufacturer is proud of his product's finish—when he wants it to keep its beauty for years—he uses Bonderizing under the paint film. Bonderizing is an effective base for fine finishes. In addition, Bonderizing's nonmetallic crystalline coating guards against corrosion, halts the spread of rust around accidental scratches and nicks. Consumers know the value of Bonderizing's finish protection. They look for it when they buy home appliances. Bonderizing is a sales advantage *your* product should have.

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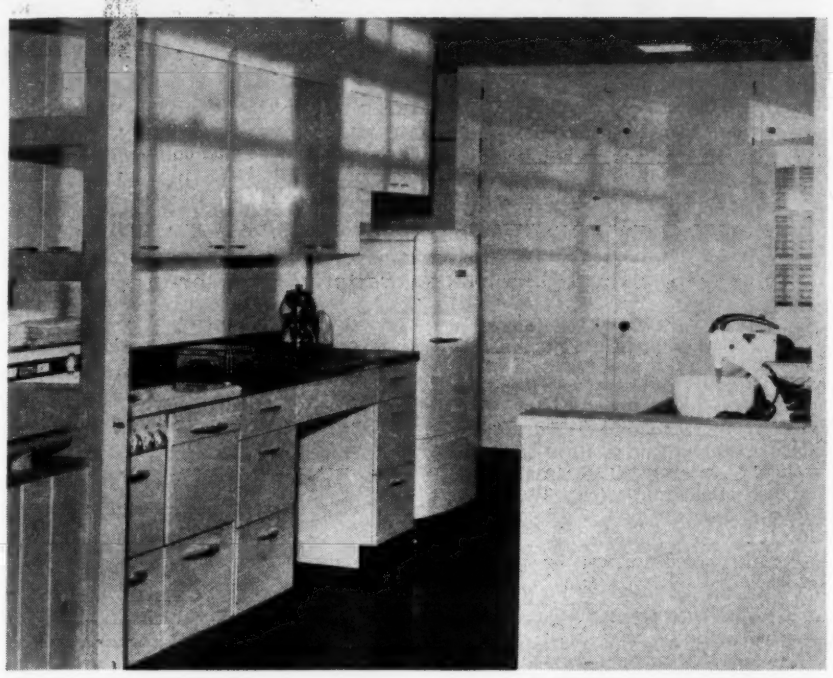
All-Electric Model Farm Kitchen



This "two-wall" all-electric kitchen is part of a model farm house on display at the Museum of Science & Industry, Chicago. Jointly prepared by International Harvester and Hotpoint, it shows (at left) an automatic electric range, metal cabinet secretarial desk, refrigerator, and wall cabinets. In the background, doors lead to a utility room which houses a home freezer and cabinet sink. At right is an automatic electric dishwasher and disposall enclosed in a cabinet sink.

* * *

150,000 Visit Museum Display Since Opening

CHICAGO — Completely equipped with an all-electric kitchen and a utility room featuring an automatic electric water heater and home freezer, the model farm house and farm yard exhibit has been viewed by more than 150,000 visitors since it was opened July 4 at the Museum of Science and Industry in Jackson Park here.

International Harvester prepared the exhibit, and Edison General Electric Appliance Co. (Hotpoint) supplied the all-electric kitchen. The kitchen is installed in a white frame and limestone house with a lawn enclosed by a white picket fence. The two-wall shaped kitchen is equipped with an automatic electric dishwasher, garbage disposal unit enclosed in a metal cabinet sink, and base cabinets along the wall; electric range, refrigerator, desk, and wall cabinets along the other wall.

The water heater, home freezer, metal cabinet sink, and wall cabinets are in the adjoining utility room. Hotpoint appliances are employed throughout, with the exception of the home freezer, which is an International Harvester model.

The farm yard exhibit includes modern farm machinery.

Westinghouse 'Preview' Sales Course Attended By 50 Key Personnel

MANSFIELD, Ohio—Approximately 50 product specialists and sales promotion managers of the Westinghouse Electric Corp. appliance district sales divisions, attended a one-week version of the company's two-week training school for wholesale salesmen at the Electric Appliance Division plant here in July.

The school, which will open this fall at a date to be announced later, will be held for two weeks once a month, according to E. J. Hegarty, manager of sales training.

"We plan to start training distributor salesmen this fall, although the exact dates of these two-week schools have not been set up," Mr. Hegarty said. "Prior to the beginning of the regular sessions this one-week version of the course will be given to key personnel of distributor organizations."

Subjects covered in the one-week course were background information on Westinghouse and its dealer organization, company dealer and distributor policies and Westinghouse promotions such as the Look Book of store modernization, cooperative advertising, etc.

84% of 'Cash-Deposit' Refrigerator Orders In Elmira Are Bonafide; Rest Duplicated

ELMIRA, N. Y.—Even though cash deposits were required in a large number of cases, a ratio of 16% of duplicated orders for refrigerators was revealed by a dealer survey conducted here by the Elmira *Star-Gazette and Advertiser*.

The newspaper is now conducting similar studies of the washing machine and automobile markets in this city.

Dealers representing 71% of the total retail sales volume in refrigerators here made available to the newspaper in confidence complete lists of consumer orders. These lists were then examined to determine how many customers entered orders with two or more dealers.

"Results show a total of 1,879 orders on the books of 18 dealers," the survey report said. "Among these it was found that 237 persons had placed orders with two or more dealers—despite the fact that local dealer policy has required at least a small cash deposit in a large number of cases."

Considering the 1,342 persons who placed but one order and the 237 "repeaters," the net number is 1,579, or about 84% of orders as actual market potential.

"Cash deposits evidently are not the answer," the newspaper warned. "It may be important that there are at least 237 chances for trouble for one or more dealers when one beats another in making a delivery.

"If a customer urgently needs a refrigerator, sacrificing a cash deposit with one or two dealers when another can make immediate delivery may not be important, at least for a while. On the other hand, a wise dealer, seeking to build goodwill, may decide to return all or part of the deposit rather than risk criticism."

For DEPENDABLE Refrigerants

SPECIFY "EXTRA DRY ESOTOO" (Liquid Sulfur Dibxide)

"V-METH-L" (Methyl Chloride)

Distributors of "FREON" REFRIGERANTS 11, 12, 21, 22, 113

VIRGINIA SMELTING COMPANY
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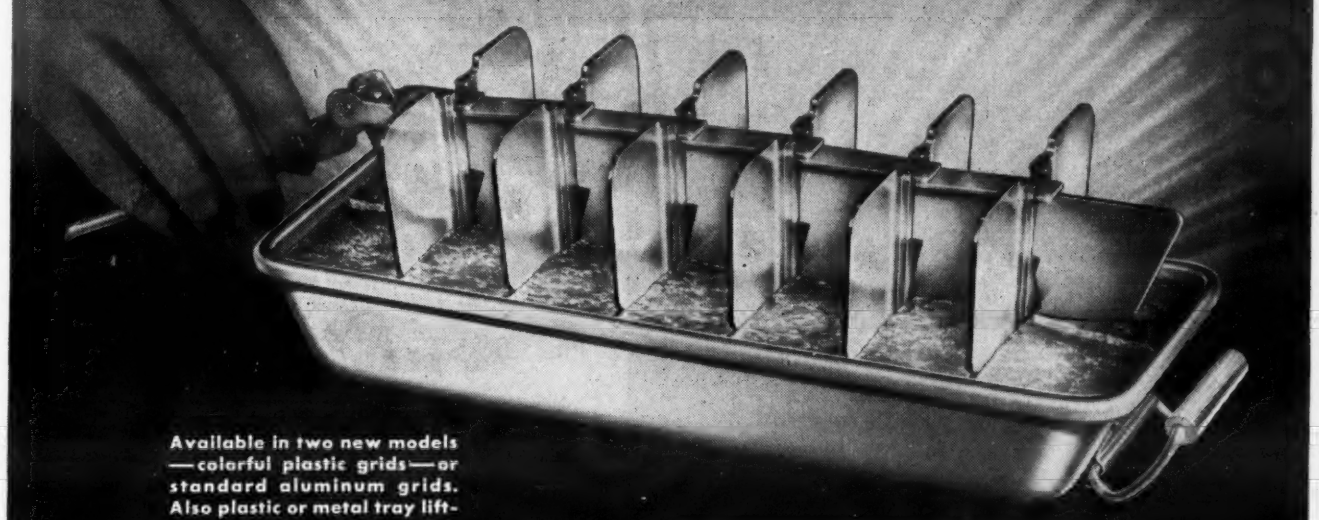
NEW YORK • BOSTON • DETROIT

It's Sensational—

The Entirely New INLAND HANDI-CUBE TRAY



Available in two new models—colorful plastic grids—or standard aluminum grids. Also plastic or metal tray lifters optional on either model.

A slight pull on the metal tray lifter, as shown, loosens the tray from the freezing compartment.

Sensationally new in every detail, the versatile Inland Handi-Cube Tray offers you a choice of grids—either standard aluminum or lovely pastel-tinted plastic.

Certainly you'll want to see this attractive revolutionary ice tray which delivers ice cubes with unprecedented ease.

Just trip the lever and feel the rugged actuating mechanism respond with any quantity of ice cubes, instantly — each one full sized and dry. It's strong and husky for permanent ice releasing service.

Graceful lines, sensational performance, and eye-catching beauty —all combine to speed the sale of this new, postwar Handi-Cube Tray.

For full particulars and prices write to—
INLAND MANUFACTURING DIVISION, *General Motors Corporation, Dayton, Ohio*

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QUICK RELEASING
ICE TRAYS BY INLAND MANUFACTURING

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You'll do this because Union Steel has the experience and facilities to give you shelves and baskets that are *right* . . . in the quantities needed to meet your production schedule . . . at prices that will lower your production costs.

Whether you want the life-time mirror-like beauty of Stainless Steel . . . or the economy, long life and high lustre of Plated Finish shelves or baskets, Union Steel can supply them to you.

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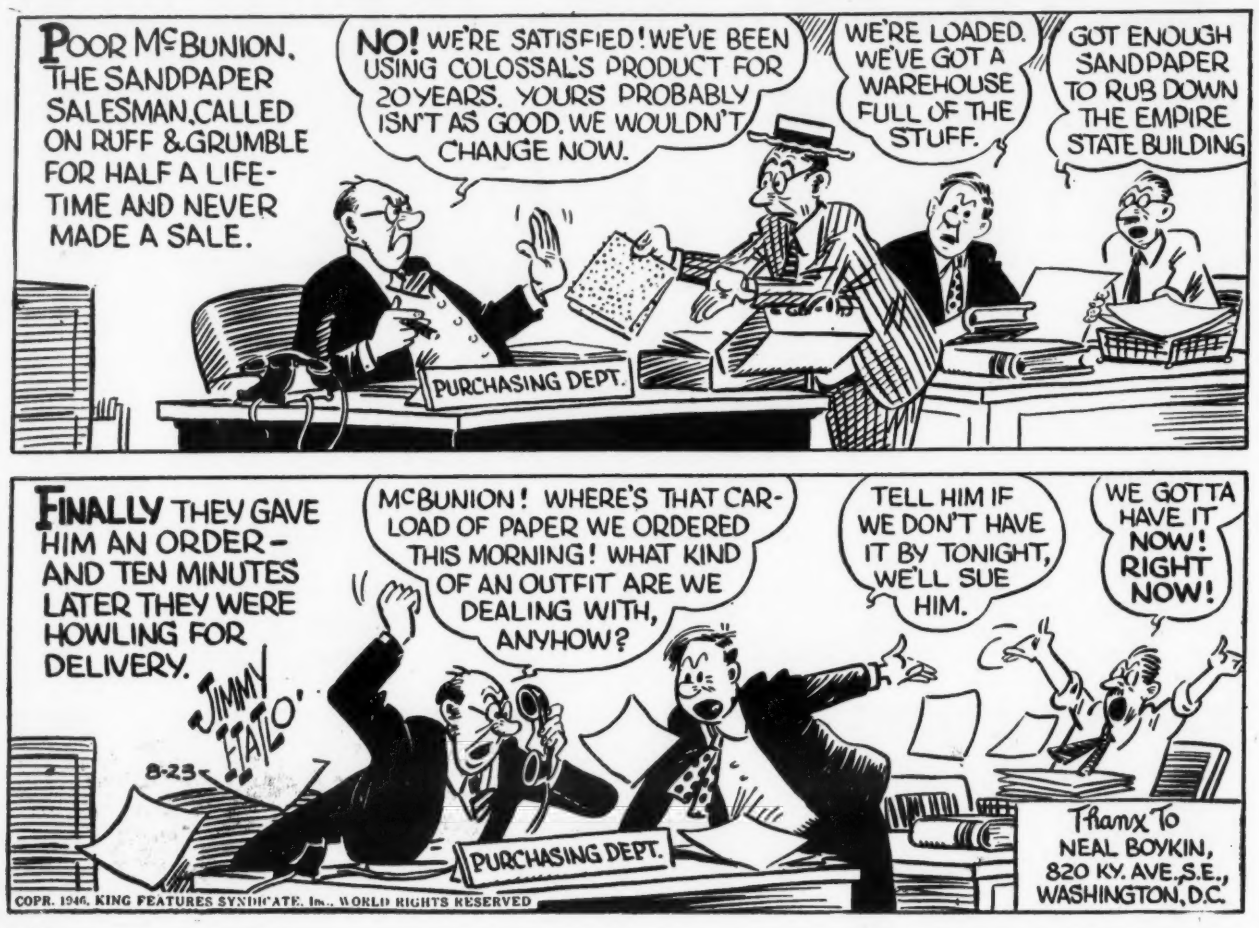
They'll Do It Every Time . . . . By Jimmy Hatlo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NO! WE'RE SATISFIED! WE'VE BEEN USING COLOSSAL'S PRODUCT FOR 20 YEARS. YOURS PROBABLY ISN'T AS GOOD. WE WOULDN'T CHANGE NOW.
WE'RE LOADED. WE'VE GOT A WAREHOUSE FULL OF THE STUFF.
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PURCHASING DEPT.
FINALLY THEY GAVE HIM AN ORDER— AND TEN MINUTES LATER THEY WERE HOWLING FOR DELIVERY.
McBUNION! WHERE'S THAT CAR-LOAD OF PAPER WE ORDERED THIS MORNING! WHAT KIND OF AN OUTFIT ARE WE DEALING WITH, ANYHOW?
TELL HIM IF WE DON'T HAVE IT BY TONIGHT, WE'LL SUE HIM.
WE GOTTA HAVE IT NOW! RIGHT NOW!
JIMMY HATLO
8-23
PURCHASING DEPT.
Thanx To NEAL BOYKIN, 820 KY. AVE., S.E., WASHINGTON, D.C.
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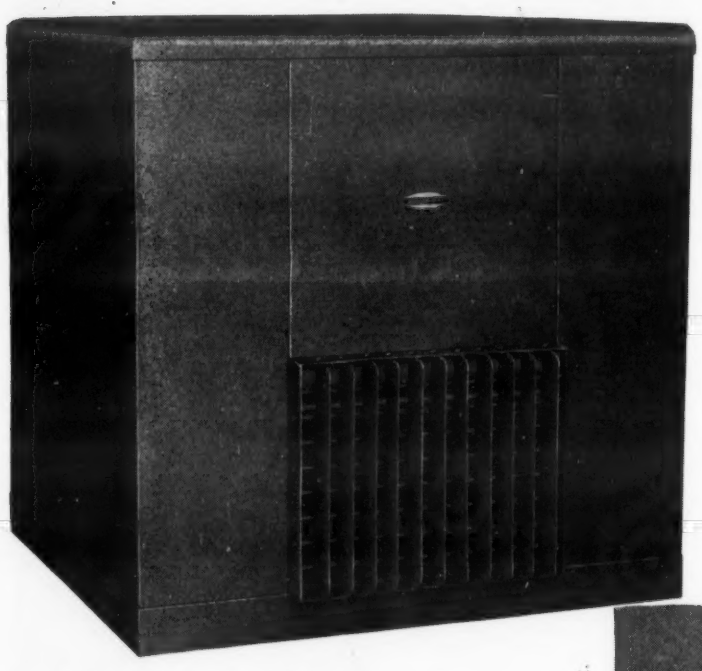
Out With Special Privileges--Revise the Wagner Act!



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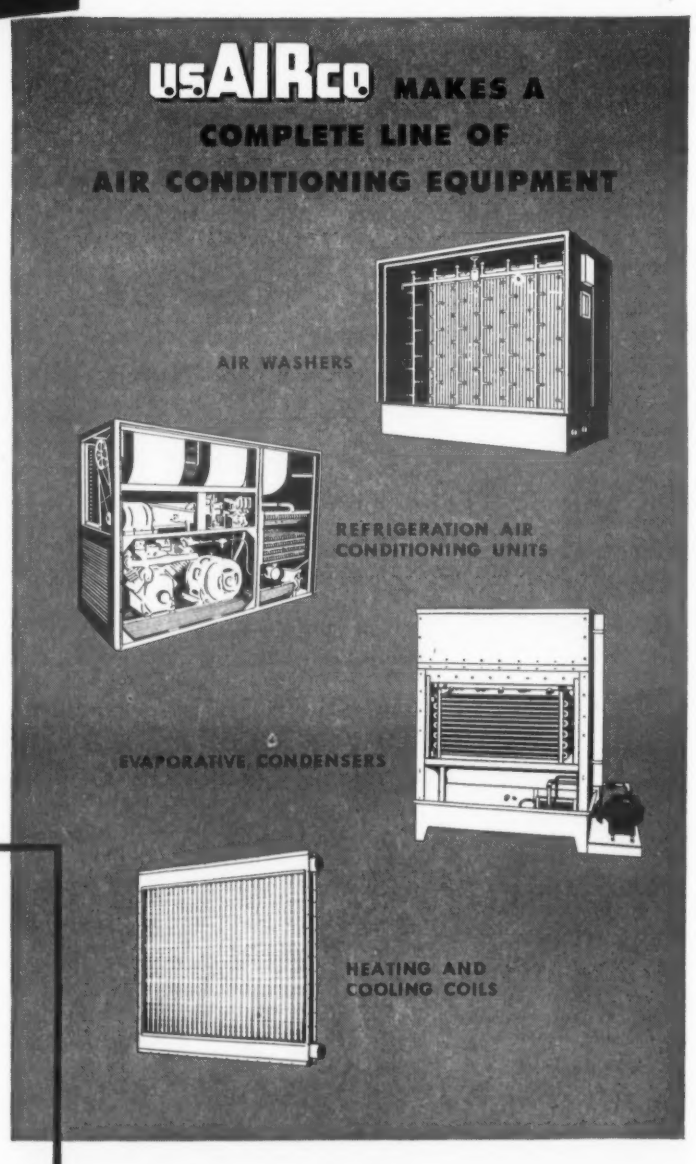
usAIRco's Just the Right Size to Give Me Personal Attention!

usAIRco is big enough to give the engineering counsel I may need—big enough to fill my orders quickly in normal times. Yes, and usAIRco's small enough to remember my name. They know me—they're small enough to reach quick decisions that help me answer my problems.

usAIRco MAKES A COMPLETE LINE OF AIR CONDITIONING EQUIPMENT



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To Preserve the American Family --Sell More Appliances!

SOCIOLOGISTS tell us that America's divorce rate is climbing at an alarming speed. Before we know it, they say, one marriage out of two will end in failure. They attribute that frightening trend both to America's ever-rising standard of living, and to the world's new awareness of women as valuable workers. Both factors, they insist, have made women independent to an unprecedented degree.

Not so long ago women had little choice. They either put up with cantankerous husbands and exasperating children—meanwhile drudging and demeaning themselves at least 16 hours a day, 7 days a week—or they were scorned and ostracized. As "old maids," they could either teach school or be librarians, for a pittance, and that was about all.

During the present age of labor-shortage phenomena, however, women have ascended to their rightful plane. Scientists have long known that women are as smart, capable, and adjustable as men. And the worldwide scarcity of "help" has proved this point. So now we men are faced with the fact that we must compete with women for our jobs. No longer can we treat them as if they were inferior animals.

Few males are prepared to readjust their lives, yet, to this astounding observation. Most of us still cherish the dream of "the little woman, waiting and sighing, working her fingers to the bone, ready to do for me till she die." The thought that women shouldn't have to be drudges and drones is darned near revolutionary.

Yet, it has happened. Women not only refuse to be librarians—they don't even want to be domestic servants any more! If the present trend continues, the household servant may one day become a legendary character. Most housewives, who are unable to employ domestic help at the high prevailing wage levels, now find it necessary to do their own homework.

In 1900, as many as one out of every 11 American families hired a domestic servant; by 1940 there was only one servant for every 17 families, and by 1944 the ratio had dwindled to one for every 20 families. If the 1946 rate of disappearance continues, only one out of 70 families will be able to hire domestic help during the next decade.

When the market for available domestic help became barren during World War II, wages for household work shot up to triple those of prewar times. This condition persists today. As an American institution, the "maid" no longer exists.

"What has become of the many females formerly employed as domestics?" one wonders. You don't have to look far for a reply. Former "domestics" have turned to more rewarding categories of employment. They are working in factories and offices at high wages. Another important factor in the decline of domestic help is the fact that immigrants now find it difficult to enter the country. In 1900, foreign-born women comprised 23% of all female servants. In 1940, however, only 12% of the nation's female servants were born outside the boundaries of this country. Today the percentage is even smaller.

In the past, negro women represented a large percentage of the domestic employment total, and 54% of all employed negro women were servants, as compared with only 11% of employed white women. However, negro women freely have been admitted to other positions in recent years.

What's the answer? Why, it's right down our alley! Home appliances can help out the servantless housewife. In the face of rising costs for domestic help, housewives are finding that an investment in washing machines, ironers, electric dishwashers, and other labor-saving devices is not only more economical than employing servants, but it is also an investment in "holding their man." No longer able to look forward to having a "maid," the housewife must have labor-saving home appliances if she is to preserve her beauty, her charm, her good humor—and thus hold her husband!

If we interpret an obvious trend correctly, housewives will expect to do more of their own homework in the future, but they still don't want to become unattractive slatterns! Thus, they look to the appliance industry to replace the vanishing domestic, and to help them keep their husbands by freeing them from the homework drudgery which emaciates beauty and undoes all those good original intentions (on the part of brides) of remaining always bright, cheerful, encouraging, helpful, and agreeable in their own homes.

What a market!

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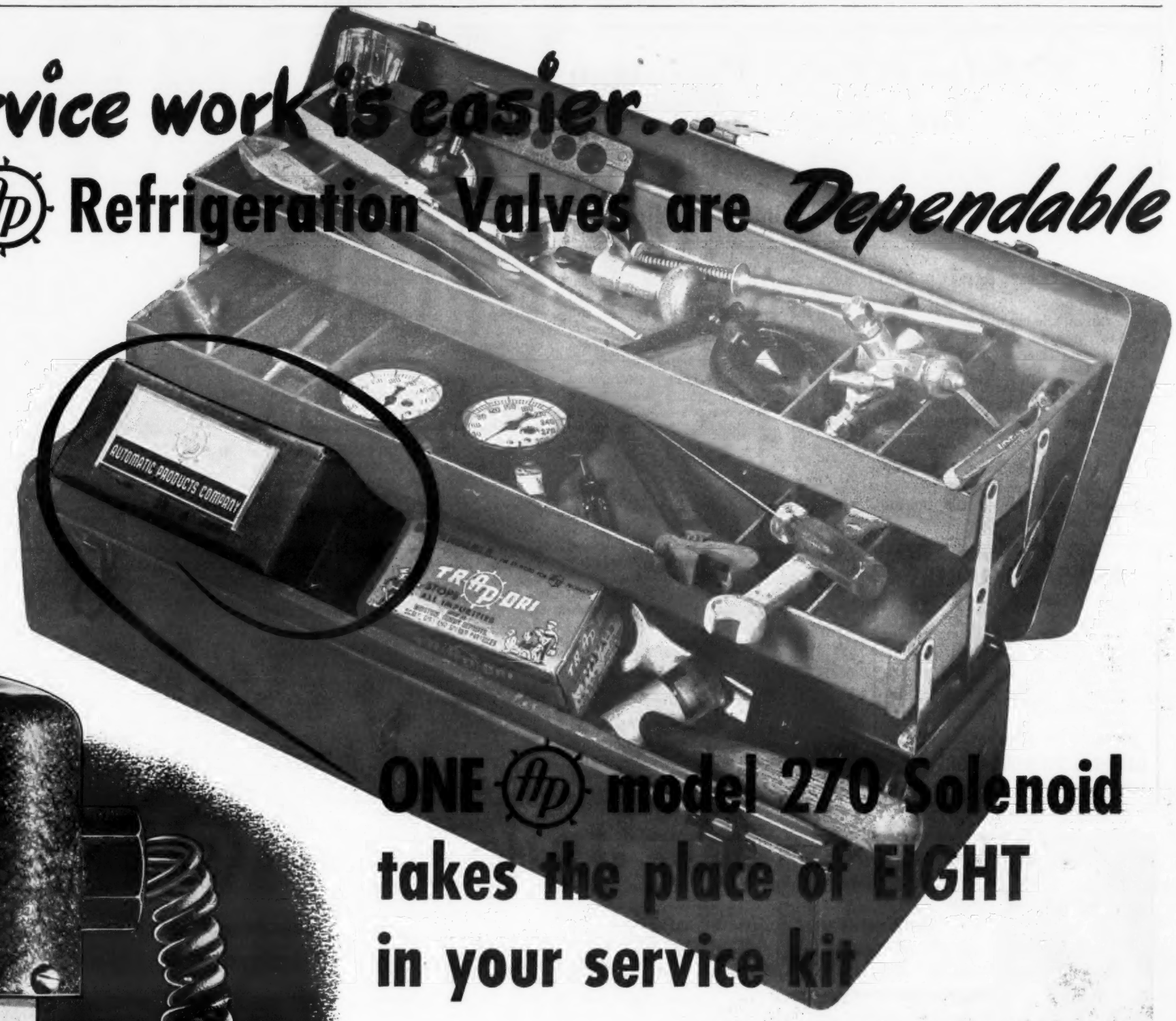

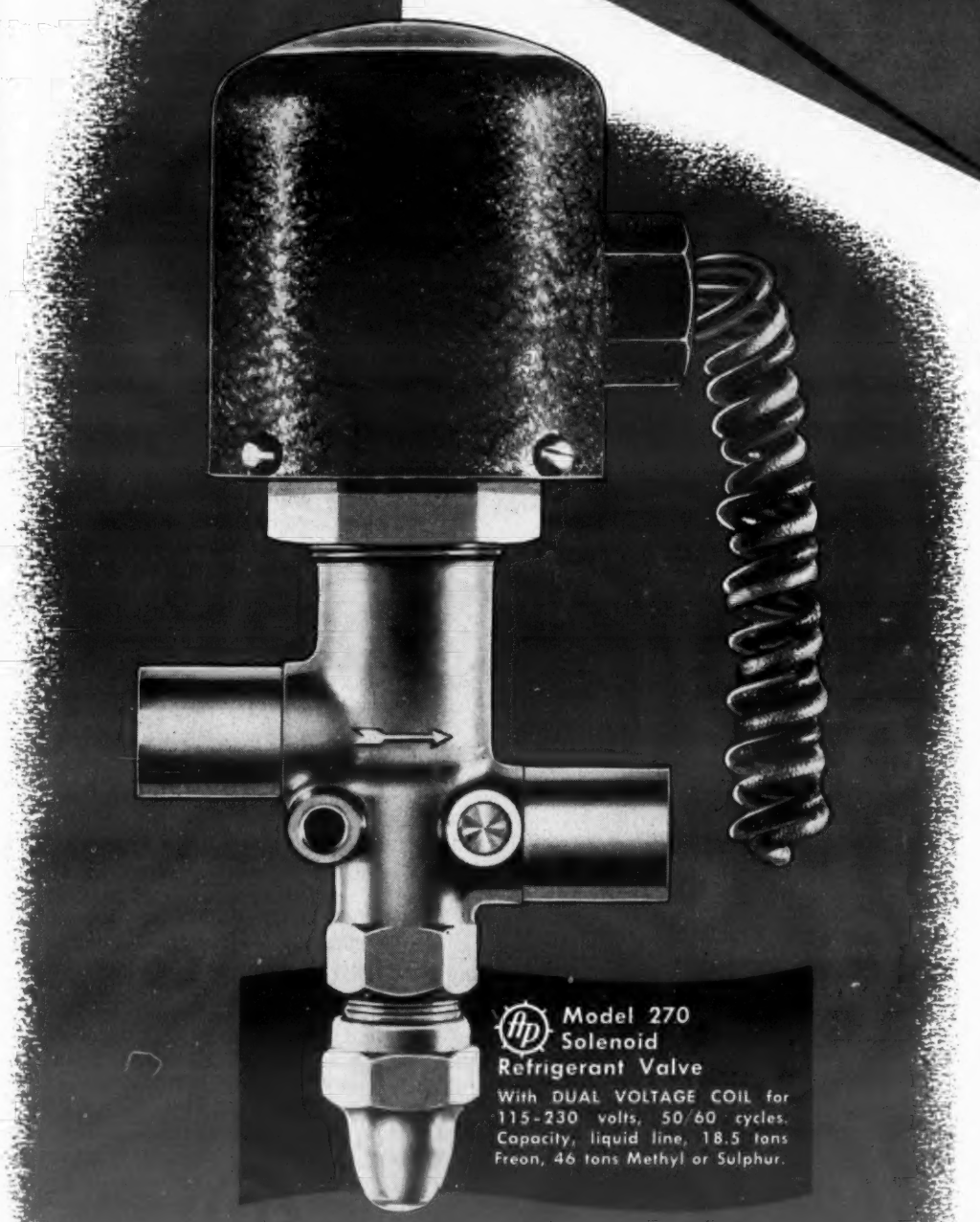
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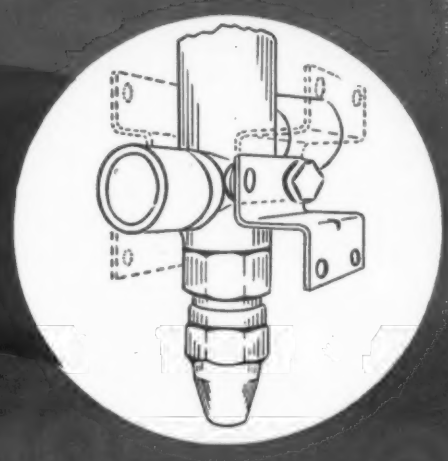

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A-P DEPENDABLE Model 270 Solenoid, with its simple, positive "Pilot Operation" requires only minimum power. Pressure holds the valve tightly shut. When current is applied, the plunger is pulled part way up, opening the pilot port and allowing pressure to leak to the pressure side. Then, with pressure above the piston reduced, the pressure below the piston opens the main valve port. The plunger, moving on upward, holds the piston away from the port, requiring no pressure drop to hold the valve open. A three-point stop, used in conjunction with a "shading coil" makes operation quiet and vibrationless. Manual opening stem is provided for use in case of current failure.

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Refrigeration Problems
And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Compressor Noise (2)

The fan on the conditioner was running to provide ventilation, which, since it was a cool day, was sufficient to keep the store comfortable. So the local man started to close the hand switch just ahead of the magnetic starter to the condensing unit motor.

SYSTEM NOT PUMPED DOWN

"Hold it a minute," said the factory man, "How about the thermostat; is it open or closed?"

"Closed, I imagine. It's set at about 72. Why?"

"Well if it is closed, that means that the solenoid valve is open, and that during all this shut-down period liquid has been allowed to flow into the evaporator, because the expansion valve hasn't been holding it, what with the feeler bulb being warm. It would have been better to have opened the switch in the thermostat-solenoid current, to have pushed the thermostat up to its highest setting or even take the fuses out of that line so that the system would pump down and keep itself pumped down."

By putting his hand on the solenoid he could tell that it was probably open, for it was warm.

"It made such an awful pounding when we started to pump it down that we pulled the main switch" said the local man.

REMOVING THE LIQUID GRADUALLY

"I'm afraid that the evaporator is full of liquid, so let's throttle the Suction Service Valve on the compressor, while we are starting it up, and until we get the liquid worked out of the evaporator.

"There is probably a lot of 'Freon' in the oil in the crankcase so we'll no doubt get a lot of slugging at first until we get the suction pressure down gradually and work the refrigerant out of the oil.

"Also let's wrap some wool felt or even a big dry cloth around the suction line to insulate the bulb away from basement air temporarily in order to get a trial run at least."

Despite these precautions, the compressor hammered badly for the first few minutes until they got the "Freon" worked out of the crankcase of the compressor and until the evaporator was normal, the expansion valve feeding properly with the Suction Service Valve wide open. The expansion valve was still overfeeding for the suction line stayed wet and liquid was, no doubt, still getting back to the compressor.

"That's sure a lot better than it ran before," said the local man, "but wait until you hear it pump down."

"It lacks a lot of being right yet, but let's pump it down. The pressure gauge shows 115 lbs., so the water valve is working all right. The compound gauge shows about 34 lbs. That's pretty low, but it's a cool day so the load is down."

VERY NOISY ON PUMP-DOWN

The local man said there was a combination switch and fuse box in the electric line to the thermostat and solenoid so he pulled the switch and the suction pressure, after a moment or two, started to go down. When it got to about 20 p.s.i. the compressor had become noisy again and it began to get even noisier. At 15 it was pounding and vibrating heavily.

"Where is the pressure control set to cut-off?" asked the factory man.

"About 10, I think."

"Why so low?"

"I don't know. It was set at that when it came. Set to cut in about 33, I believe. We didn't change it."

PRESSURE CONTROL SETTING WRONG

"Those are about the settings for a commercial, self-defrosting cycle so we use that standard setting for all pressure controls, but expect they will be changed on the job to suit local conditions or the requirements of the individual installations.

"There is no point in pumping it down so low. Just a few pounds below the normal average running suction pressure to assure that all of the liquid in the evaporator has been vaporized so that the evaporator is left 'dry,' that is, with only vapor in it.

"This way it reduces the pressure on the oil in the crankcase of the compressor so low that the refrigerant violently boils out, causing the oil to foam up and be carried over the pistons. That's what makes all the noise. It's hazardous too; might break a rod or something.

"The evaporator is plenty dry now, so open that main switch to the motor.

THE FIVE CORRECTION STEPS

"Now here's what we do:

1. Move the bulb of the expansion valve to the suction line inside the conditioner, near the coil.
2. Put on a heat-exchanger.
3. Reset the pressure control to about 30 cut-in, 18 cut-out. That way it cuts in soon after the solenoid opens and cuts-out low enough to be sure the coil is dry, but high enough to minimize slugging from excessive lowering of the crankcase pressure.
4. Take out some of this oil. It's 'way above the oil-sight gauge. Must be three quarts too much. The rods and throws on the crankshaft stir it up too much and aggravate the foaming and slugging.
5. Readjust the expansion valve to make certain that the coil is fully active, but that only vapor gets out of the heat-exchanger back into the suction line and into the compressor.

"By far, most of the 'noisy' compressors that are returned to us at the factory as defective under the warranty are damaged, not really defective. Inspection of them shows that the oil has been thinned by liquid returned to them instead of vapor. This liquid return not only causes the damage but it also is the direct and practically the only cause of 'oil slugging.'

'OIL SLUGGING' IS NOT OIL PUMPING

"That name, 'oil slugging' does not exactly describe what takes place. However it certainly isn't as bad as the term 'oil pumping' which implies that, like an old automobile, the compressor has such loose fitting pistons that oil just gets by them.

"A compressor has to be pretty old and badly worn before the amount of oil that goes by its pistons will make much difference in the actual operation of the system. Certainly it will not cause noise to any appreciable extent.

"A compressor that old and worn will be noisy no doubt, but it will be mechanical noise from loose parts, not the noise of the slamming of the pistons against a solid charge of liquid refrigerant and/or oil between them and the cylinder heads and valve plates.

"The oil in the crankcase is exposed to refrigerant and will absorb it, even if it is a vapor, and the colder the oil is and/or the higher the vapor pressure is, the more refrigerant will be absorbed.

"By keeping the crankcase reasonably warm, we can keep the oil from absorbing too much 'Freon,' and by preventing quick reductions in crankcase pressure, we can keep much of the turbulence and foaming out of the oil.

"Now, let's get going on making these changes and I'll bet we'll find that we have whipped your troubles on this job."

He predicted truly. After the five changes were made the unit started and ran quietly throughout the running cycle and during the pump-down period. The compressor fortunately had not been damaged, for the weather had been cool and it had not been used much since it was installed. It would not have taken many days of the punishment that the compressor was taking to loosen the bearings and bushings, bend or break rods or shaft, break valves or even a cylinder head casting and damage the seal.

Philco Shows $164,787 Profit In 2nd Quarter

PHILADELPHIA — Philco Corp. had an operating profit of $164,787 in the second quarter of 1946, as compared with a loss from operations of $2,569,471 in the first quarter, and thereby reduced the operating loss for the first six months to $2,404,684, it was announced today by John Ballantyne, president. After estimated tax credits of $2,350,000, the net loss was $54,684 for the first half of 1946, Mr. Ballantyne said.

"Operations of Philco took a decided turn for the better in the second quarter of 1946 and we are very hopeful that this trend will continue," Mr. Ballantyne said.

Form Electric Service Co.

EL DORADO, Ark.—The Electric Service Co. has been opened here by A. C. Davis and J. C. Offut at 1405 North West Avenue and will handle electrical supplies and appliances, electric repair work and commercial wiring.

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large coil surface, blower fan, baked finish, stainless steel doors. BEVERAGE COOLERS also available stainless steel throughout. REACH-IN REFRIGERATORS. 20, 30, 42 cu. ft. sizes, stainless steel inside and out. ICE CREAM CABINETS—6 hole, hard rubber flip-flop doors, stainless steel tops. FREEZERS—8, 12, 20, and 25 cu. ft. with plate coils. OPEN TYPE FROSTED FOOD CASES—20, 25, 31 cu. ft. with plates.

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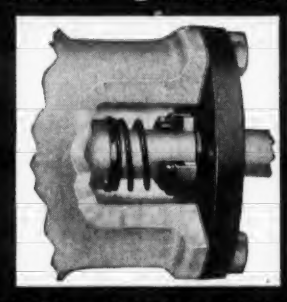

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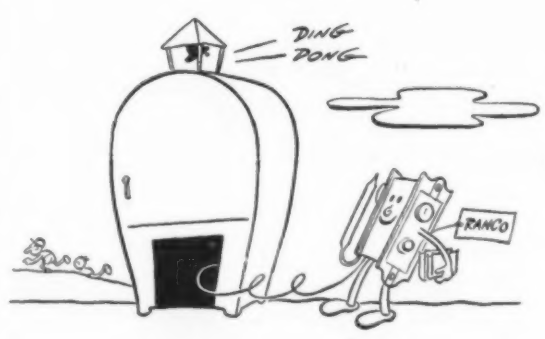

Ranco Refrigeration Controls stay on the job—24 hours a day—year after year—with a minimum of attention.

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Big or small, there is a Ranco Control for practically every cooling or freezing box—either an exact or general replacement.

Your jobber is thoroughly familiar with the complete Ranco line of controls—if you are in doubt he can advise you as to the right control to install. If you have an unusual problem, write to us—our engineers will gladly help you solve it.

Ranco Inc. Columbus 1, Ohio

Operator Proves That Innovations Win Locker Plant Customers

Special Coats, Attendant, Plus Reserve Refrigeration Unit Boost Patronage

Landscaping around Arctic Food Locker Co. reflects the fashionableness of the residential district of Clayton, a suburb of St. Louis.

ST. LOUIS—Exceptional courtesy in connection with locker plant customers is one reason for the success of Arctic Food Lockers Co., locker plant in suburban Clayton, west of St. Louis.

Nolan Stinson, head of the locker plant, discovered early in 1942 that many of his regular women locker renters disliked to enter the zero-temperature locker rooms. Inasmuch as the locker plant is located in the center of one of St. Louis' most fashionable residential districts, smartly-clad women also rebelled against soiling silks and other dress fabrics in visiting their lockers.

To offset this, the first thing Mr. Stinson did was to set up "attendant service." Under this plan, there is a full-time attendant on duty eight hours a day, who accepts the locker key from the customer and extracts whatever food items are desired, "while the customer waits."

This system, although it had many advantages, was not entirely satisfactory, according to Mr. Stinson. Other customers, while disliking the cold atmosphere of the locker room, nevertheless wished to visit their lockers in privacy, and steadfastly refused to make use of the service attendant.

The solution which ultimately solved all problems was the purchase of six 100% wool coats, loose-fitting garments, which may be worn by either men or women. The coats, knee length, slip into a white duck cover, which is kept clean and neat by weekly laundering.

The six coats are kept on a rack at the vestibule leading into the locker plant, with a sign inviting any customer to make use of one as he desires. They are ample protection against chill inside the locker room, and the innovation is something which few locker customers forget.

Mr. Stinson paid $7.85 apiece for the six coats, and has replaced two or three since the original purchase.

Another fundamental service which Mr. Stinson merchandises aggressively to his customers is the fact that the Arctic Food Lockers plant is equipped with a "double refrigeration system." When the plant was constructed in 1942, Mr. Stinson bought two complete refrigeration systems, including compressors, coils, control panels, and condensers. These were set up in duplicate at the rear of the plant, where either one may be cut in for refrigeration use if the other goes out of service.

The second refrigeration system, instead of merely being held in reserve, is operated several days each month, to keep working parts in order. Both have the job of maintaining 0° F. temperatures in a locker room containing 355 metal lockers and a large quick-freeze chamber at -30° F.

"Our experience has been that a good many locker renters now are thoroughly familiar with all aspects of refrigeration," Mr. Stinson said. "Such people are always well impressed when we display the double refrigeration system—which I feel every locker plant should maintain as thorough protection for its customer's food items."

A customer, aided by an attendant, puts on one of Arctic's loose-fitting, 100% wool coats that permits her to visit her locker in comfort and privacy.

Demand for Quick-Frozen Pineapple To Be Tested Soon In Newark and Reno

HONOLULU, T. H.—Field ripened pineapple, boxed and frozen within 24 hours after picking, will soon appear in frozen food outlets in Newark, N. J., and Reno, Nev., in a test of U. S. demand for the fruit in this form, the Hawaiian Pineapple Co. here has announced.

Limited sale of one-pound packages of pineapple chunks will be inaugurated, the company declared, even though it is not able to supply fully the demand for canned pineapple.

The experiment, according to the firm, will form the basis for future planning and give the company experience in production and shipping the fruit in frozen form.

If the experiment should prove to be a success, the Hawaiian Pineapple Co. anticipates that fresh frozen pineapple eventually will attain as wide a distribution as the canned product.

When production lines are in full operation, the company predicts that one truck, loaded with 960 one-pound packages, could be hauled away from the cannery every 20 minutes.

At present, however, only one pilot line is in operation here.

All pineapple follows the same skinning and cutting process initially, the company explained. After the pineapples are mechanically chopped, a conveyor belt carries those destined for freezing to a hand loaded measuring funnel.

The funnel deposits exactly one pound of pineapple chunks into a box lined with laminated cellophane. Then the box is carried to a machine which pours in a fixed amount of syrup. Another machine sucks all the air out of the package and seals it.

At the end of the production line, the box is mechanically wrapped in special cellophane stamped with the Dole label. The packages are then frozen solidly at —30° F. by a combination of the coil contact and air blast freezing methods.

Refrigeration Corp. Will Reprint 'Look' Article

NEW YORK CITY — Having cooperated with *Look* magazine on a picture story of quick freezing, Refrigeration Corp. of America will reprint the story for distribution to Frigid Freeze Centers, department stores, and community locker plants handling the Frigid Freeze line of home and farm lockers, the company declared.

Two of the four photographs in the article, which appeared in the July 9, 1946, issue, contained the company's 6-cu. ft. Frigid Freeze home locker. This locker, the company said, can be converted into a quick freezer by the turn of a dial. *Look* described quick freezing as "the latest and greatest advance in food preservation."

The article also pictured the potentials of the frozen food industry in terms of the commercial market, the home market, locker plants, processors, and manufacturers of freezers.

Since 1935

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for profitable Locker Plant Operation

That is why over 57% of the Locker Plants are MASTER equipped. No matter where you go, you will find that MASTER Lockers predominate. Be wise demand

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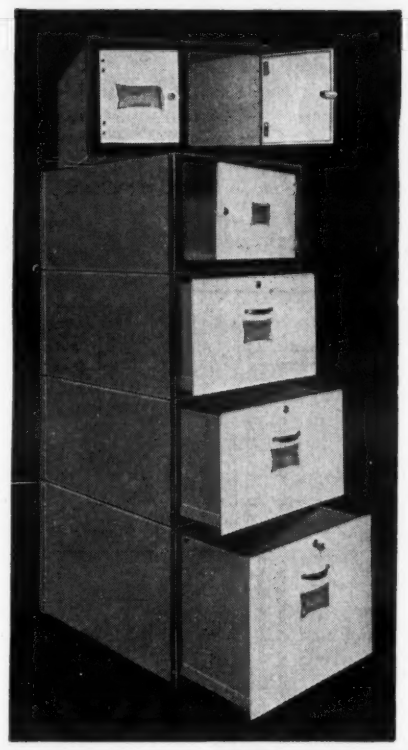

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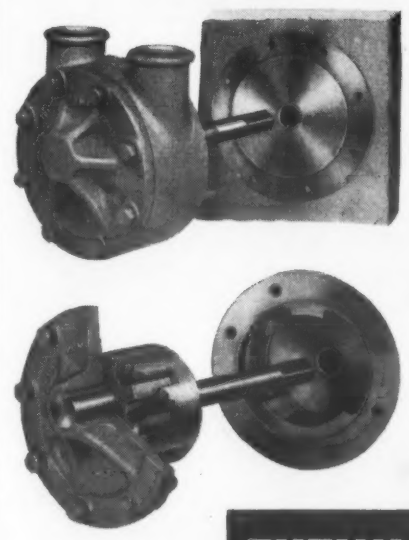

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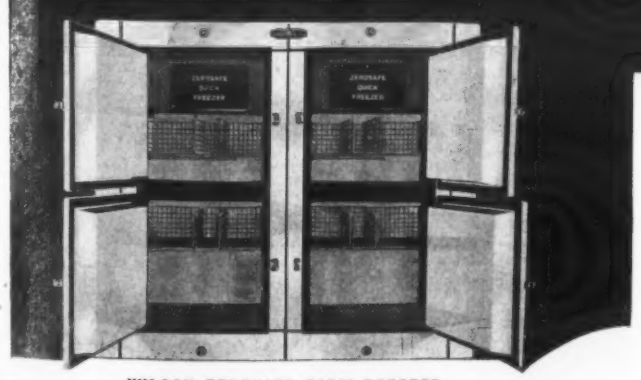

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Design, Installation, and Control Features of Thermobank Systems

By S. Charles Segal, Kramer-Trenton Co.

Refrigeration systems operating at temperature levels below 32° F. present the major problem of defrosting. The Kramer "Thermobank" system providing automatic defrosting is somewhat different from the standard refrigeration installation, and it is the purpose of this paper to present to installation and servicemen the fundamental principles of its operation and a detailed description of its installation.

During the refrigeration cycle the "Thermobank" system operates as a standard refrigeration installation. The refrigeration cycle can be traced on Fig. 1.

The solenoid valve (9) is closed during normal operation. The hot gas leaving the compressor is detoured through the "Thermobank," where some of the heat is surrendered to the liquid in the "bank." The refrigerant then flows through the condenser, receiver, heat exchanger, expansion valve and coil and returns to the suction of the compressor.

During the defrost cycle the electric timer opens the solenoid valve Fig 1-(9). The pressure in the hot gas line to the iced evaporator coil is less than the pressure in the condenser line. This causes the hot gas to travel to the evaporator coil instead of the condenser.

When the hot gas hits the cold coil it condenses in the same manner as it would in any standard condenser, thus giving up its heat, and causing the coil to defrost.

As the heat is removed from the gas it naturally changes to a liquid state. This liquid is pumped through the suction line until it reaches the "Thermobank" (5). The refrigerant liquid goes into the inner tank of the "Bank" and drops to the bottom.

This tank is surrounded with a solution which was heated during the refrigeration cycle, thus "banking" heat. This "banked" heat evaporates all the liquid refrigerant in the "bank" quickly. The refrigerant then returns to the compressor in a vapor state through fitting No. 4.

Since there is a possibility that some of the oil circulating through the system will collect in the bottom of the inner tank of the "bank," some provision must be made to prevent it from being trapped there.

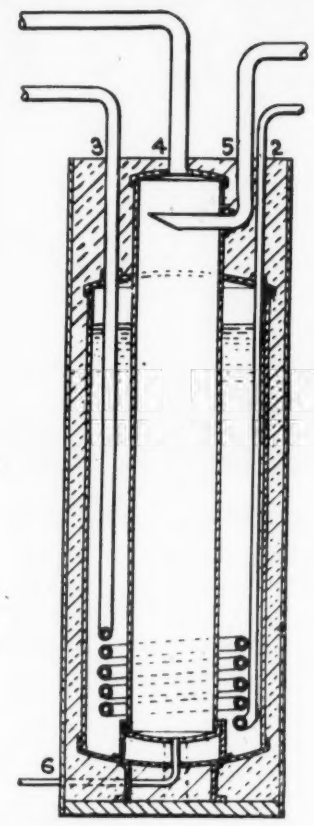
This is accomplished by providing a small tube at the bottom of the tank (6) which is connected to the suction line. This line is very small in diameter and will permit the oil to return without allowing the refrigerant to return to the suction line in a liquid state.

During the defrost period the compressor is in continuous operation. To change from the refrigeration cycle to the defrost cycle only one valve (9) is opened and that is accomplished by means of an electric timer. Hand valve (8) indicated in Fig. 1 is used for servicing only.

Two or more evaporators can be used with one compressor but only one "Thermobank" is used with each compressor. When two or more evaporators are used with one compressor it is referred to as a multiple system.

Fig. 2 shows the general diagram of the multiple system layout. In large freezers using multiple evaporators connected to two or more compressors the timer should be set so as to defrost each compressor at a different time. In this way the box temperature rise during defrost is minimized.

Fig. 4. Design of Unit



PLACING THE EVAPORATOR

In a system of this type evaporators served by different compressors should not be installed opposite each other. This will prevent cold air from one unit striking another unit which is being defrosted. Correct and incorrect arrangements are illustrated in Fig. 3.

The "Thermobank" (Fig. 4) is a heat exchanger having a high side and a low side. It is constructed of two tanks, one within the other. The inner tank is the low side and is used to evaporate the liquid refrigerant coming from the evaporator during the defrost cycle. The leads (4 and 5) from the inner tank are connected into the suction line.

The inner tank is longer than the outer tank. This is so designed to prevent the suction gases from being heated during the normal refrigeration cycle. The outer tank contains a high side coil immersed in an anti-freeze solution. The leads to the immersion coil (2 and 3) are connected into the system between the compressor discharge and the condenser inlet.

'BANKING' SYSTEM

The hot gases leaving the compressor pass through the immersion coil heating the anti-freeze solution, which stores, or "banks," the heat used during the defrost period. The complete "bank" is insulated to prevent the loss of the "banked" heat. All leads on the "Thermobank" are marked in the same manner as illustrated in Figs. 1, 2, and 4.

The "Thermobank" is normally furnished for vertical mounting only. In the event space limitations prevent the use of this type, it can be furnished for horizontal mounting. These two types cannot be interchanged.

To reduce shipping weight, the unit is shipped with a concentrated anti-freeze solution. Water must be added to give the proper concentration. To add water, the access door of the unit and the insulation in the upper part of the unit are removed, then the ½ in. plug on the top of the tank and the ⅛ in. plug on the side of the tank are removed.

Water is poured through the ½ in. fitting, using a rubber hose or syphon tube, to the level of the ⅛ in. fitting. When both plugs, insulation and door are replaced the unit is permanently sealed and requires no additional solution or water.

OIL RETURN PROVIDED

To return the oil that is accumulated in the bottom of the vertical (Type V) unit to the compressor, the oil return is connected into the suction line, using ¼ in. O.D. tubing.

The bottom of the unit must be a minimum of 1 in. above the oil return fitting in the suction line. This fitting must be above the oil level of the compressor crankcase.

Fig. 1. With Single Compressor and Evaporator

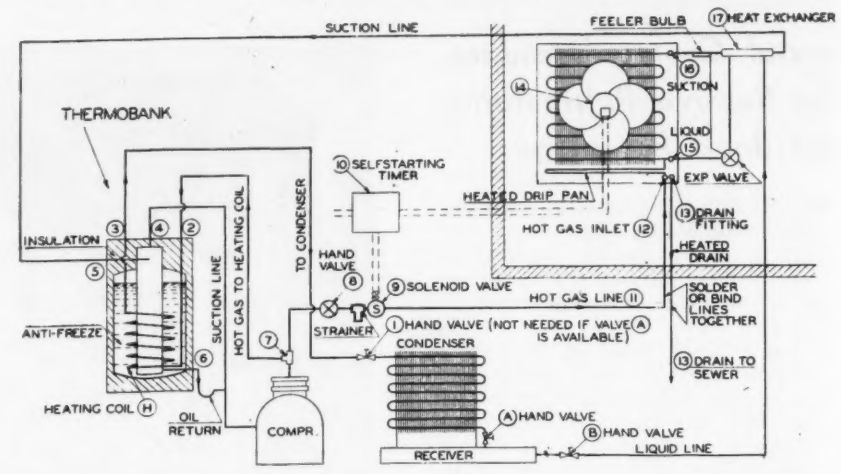
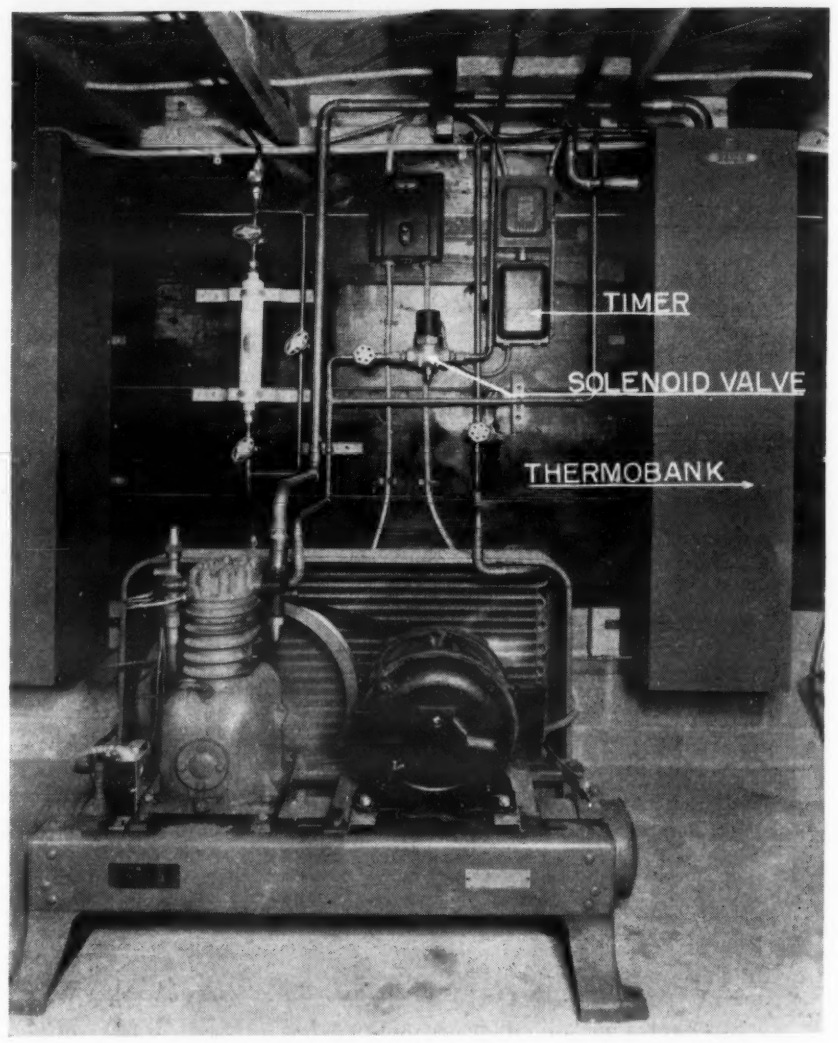


Fig. 1-A. Picture Showing Essential Parts



The horizontal (Type H) "Thermobank" has a built-in oil return and does not require any outside oil return connections. To insure positive oil return, the bottom of the horizontal type must be mounted level and at least 1 in. above the compressor suction fitting.

The "Thermobank" should be mounted securely outside of the refrigerator in a location near the compressor. All piping leading to and from the unit must be properly supported either from the wall or from the ceiling, and the unit must never become an anchor to support piping. Fig. 5 illustrates the correct piping arrangement.

HIGH SIDE SHUTOFF IS RECOMMENDED

The system should have a high side shutoff valve for installation and servicing. If there is no receiver inlet valve furnished on the condenser unit the charge should be removed from the receiver and a hand valve (1) installed as shown in Fig. 1.

To install the unit the existing line is disconnected from the compressor discharge to the condenser inlet. A new discharge line from the discharge valve on the compressor is run to Tee (7) Fig. 1 and from there to connection (2) on the "Thermobank." The size of this line should be the same as the fitting on the compressor discharge valve.

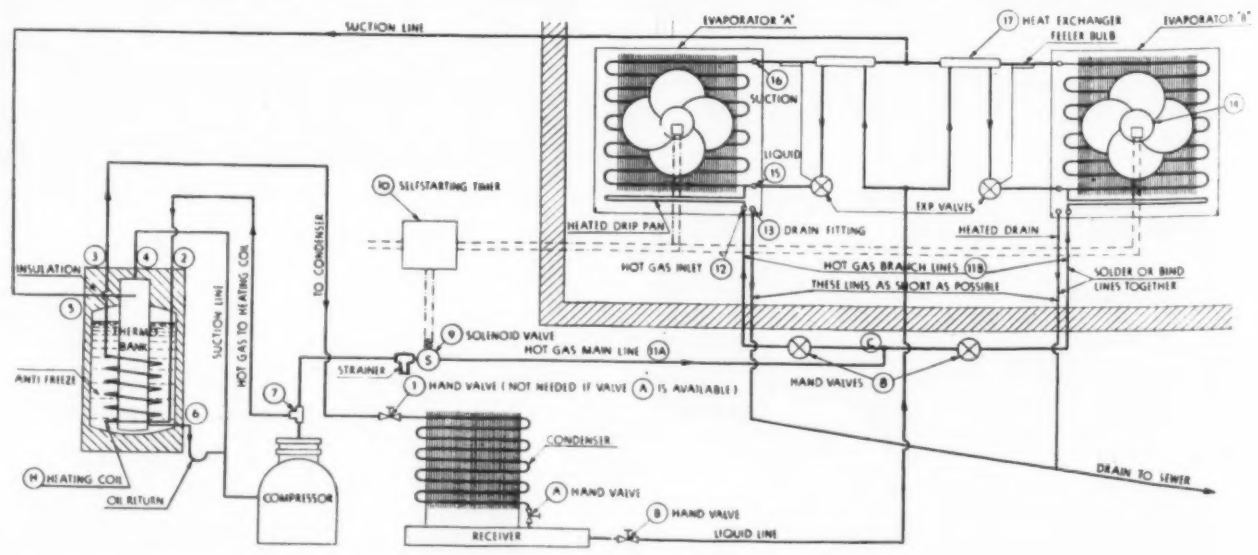
Lead (3) on the "Bank" is connected to the condenser, using the same size tube as the compressor discharge valve. The size of the hot gas line from Tee (7) to the hot gas inlet (12) on the evaporator must be in accord to Tables 1 and 2.

Fitting sizes of the equipment furnished should not be used to determine the size of the line. When necessary, reducing fittings should be used.

In the "Thermobank" system the defrost cycle can be set to any required frequency and duration. This permits the use of the same type of coil surface as used in evaporators applied to temperatures above 32° F.

(Continued on Page 15, Column 1)

Fig. 2. Installation With Multiple Evaporators and a Single Compressor



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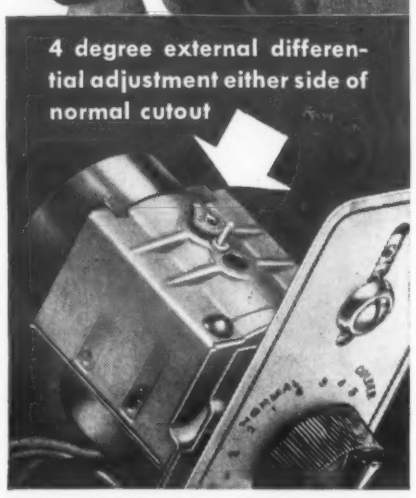

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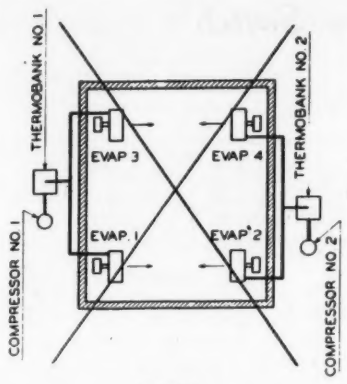
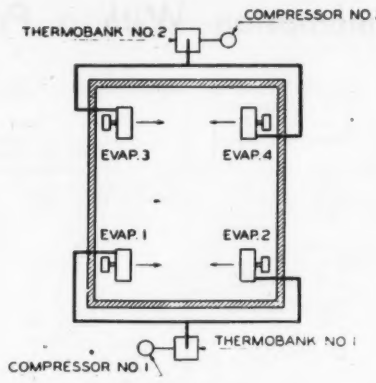
Fig. 3. Multiple Hookups With 2 Compressors



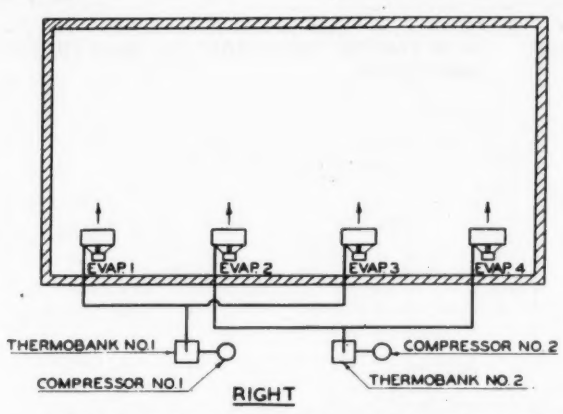
WRONG

EVAPORATORS NO 1 AND 3 DEFROST AT THE SAME TIME WHILE NOS 2 AND 4 ARE OPERATING, AND VICE VERSA COLD AIR FROM # 2 AND # 4 STRIKES # 1 AND # 3 DURING DEFROST



RIGHT

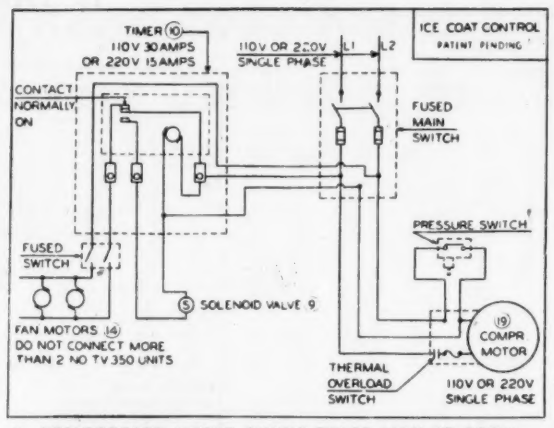
EVAPORATORS NO 1 AND 2 DEFROST AT THE SAME TIME WHILE NOS 3 AND 4 ARE OPERATING AND VICE VERSA COLD AIR IS NOT DIRECTLY STRIKING THE EVAPORATORS WHICH ARE BEING DEFROSTED



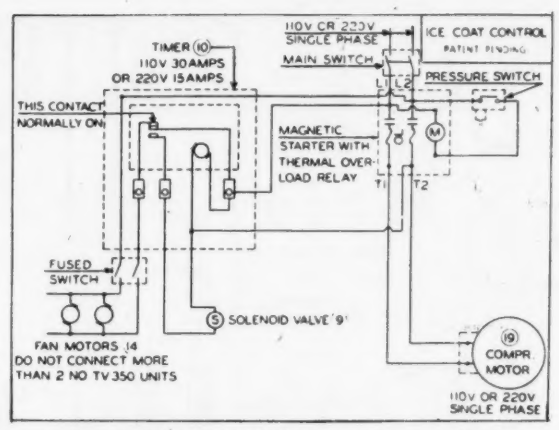
RIGHT

EVAPORATORS NO 1 AND 3 DEFROST AT THE SAME TIME WHILE NOS 2 AND 4 ARE OPERATING, AND VICE VERSA. THIS ARRANGEMENT PROVIDES EVEN AIR DISTRIBUTION DURING DEFROST

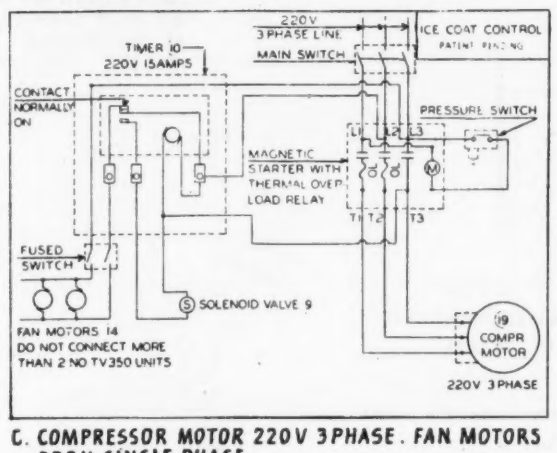
Fig. 6. Wiring Diagram Where Pressure Switch Control Is Used



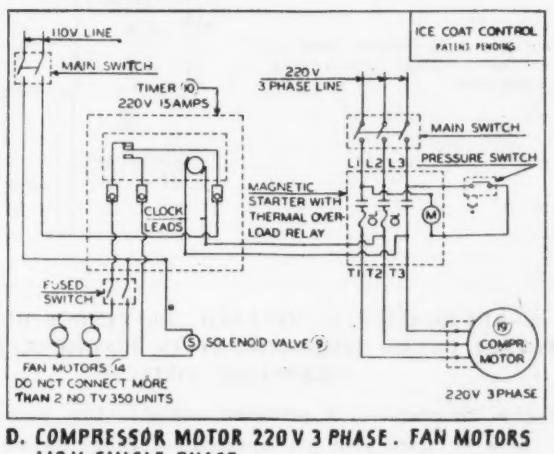
A. COMPRESSOR MOTOR SINGLE PHASE 110V OR 220V WITHOUT STARTER. FAN MOTORS USE SAME CURRENT AS COMPRESSOR.



B. COMPRESSOR MOTOR SINGLE PHASE 110V OR 220V WITH STARTER. FAN MOTORS USE SAME CURRENT AS COMPRESSOR.



C. COMPRESSOR MOTOR 220V 3 PHASE. FAN MOTORS 220V SINGLE PHASE



D. COMPRESSOR MOTOR 220V 3 PHASE. FAN MOTORS 110V SINGLE PHASE.

Thermobank System--

(Continued from Page 14, Column 5)

Since the unit is mounted on the ceiling, it allows for a maximum of storage space.

The evaporator used with the system differs from the standard unit in that the drain pan is heated with the hot gas line. This is to prevent the pan from freezing up and to insure a positive drain from the defrosting coil.

There are four leads on the evaporator, a refrigerant inlet and outlet, a water drain, and a hot gas inlet. All leads on the unit are properly tagged. The drain line should be the same size tubing as the drain fitting on the evaporator.

HOT GAS LINE POSITION IMPORTANT

The hot gas line must be soldered or clamped to the drain line for the entire length inside the freezer. This line should be pitched sufficiently to insure quick and positive drainage, to prevent the drain line from freezing.

A standard heat exchanger is furnished with each evaporator. The heat exchanger is installed inside the refrigerated space, with the feeler bulb of the expansion valve clamped to the suction line between the evaporator and the heat exchanger.

The refrigeration circuit is completed by connecting the suction line from the heat exchanger to the "Thermobank" lead (5), and lead (4) is connected to the suction valve of the compressor.

In selecting a thermostatic expansion valve the manufacturer's catalog should be consulted to make sure that the valve will have the required B.t.u. range and will operate satisfactorily for the desired refrigerant temperatures.

If a water-cooled condenser is used, the water regulating valve should be adjusted to maintain a condensing temperature of not less than 100° F. This corresponds to 102 lbs./sq. in. for methyl chloride and 117 lbs./sq. in. for "Freon 12."

For good winter operation of the system both the condensing unit and the "Thermobank" must be placed in a heated space where the temperature will not drop below 40° F.

TIME CLOCK OPERATION

The time clock controls a single pole double throw switch. This in turn controls the fan motors and solenoid valve. During the normal refrigeration cycle the fan motors are in operation with the solenoid valve closed. During the defrost cycle the motors are stopped and the solenoid valve is opened.

Fans on the evaporator are wired to operate continuously and only stop during the defrost period (Fig. 6). The fan motors, solenoid valves and timer all operate on single phase.

The solenoid valve and fan motors must operate on the same voltage characteristics; however, the timer can operate on the same or different voltage.

Figs. 6 and 7 cover wiring diagrams under various current characteristics and controls. Should conditions be different than those illustrated, special wiring diagrams can be furnished.

DEFROST CYCLE

When the system is controlled by means of a thermostatic switch, a pressure control must also be used to act as a high and low pressure limit switch. Tables 3 and 4 show the approximate control settings for this application.

From the wiring diagrams it can be noted that the timer does not operate when the compressor is stopped. The standard setting of the times is for a defrost cycle every three hours of compressor operation. Since the ice accumulation takes place only during the compressor operation, the ice accumulation at the beginning of each defrost will be approximately the same.

The duration of the defrost period is approximately six minutes. All timers are adjusted at the factory for a three-hour defrost cycle and a period of six minutes. This setting will take care of all normal installations.

Should there be some abnormal usage load such as heavy door usage, large turnover of storage goods, heavy freezing load, etc., the moisture load will be heavy.

If such a heavy moisture load is anticipated a 1½-hour defrost cycle should be used. The clock can be adjusted to vary the defrost frequency as well as the duration.

There is a high moisture load *(Concluded on Page 16, Column 3)*

TABLE 1—HOT GAS MAINS FOR THERMOBANK SYSTEMS FOR 'FREON-12' FOR 0° FREEZERS*

Balanced Capacity of System B.t.u./hr.	Minimum O.D. of Hot Gas Line For Length of Run Shown* Up to 20 ft.	Up to 50 ft.	Up to 100 ft.
Up to 1,000	⅝"	⅝"	⅝"
Up to 1,500	⅝"	⅝"	⅞"
Up to 2,000	⅝"	⅞"	⅞"
Up to 2,500	⅝"	⅞"	⅞"
Up to 3,000	⅞"	⅞"	1⅛"
Up to 4,000	⅞"	1⅛"	1⅛"
Up to 5,000	⅞"	1⅛"	1⅛"
Up to 6,000	1⅛"	1⅛"	1⅜"
Up to 7,000	1⅛"	1⅛"	1⅜"
Up to 8,000	1⅛"	1⅜"	1⅜"
Up to 9,000	1⅛"	1⅜"	1⅜"
Up to 12,000	1⅜"	1⅜"	1⅜"
Up to 15,000	1⅜"	1⅜"	1⅝"
Up to 21,000	1⅜"	1⅝"	1⅝"
Up to 28,000	1⅝"	1⅝"	1⅝"
Up to 33,000	1⅝"	1⅝"	1⅝"
Up to 41,000	1⅝"	1⅝"	1⅝"
Up to 52,000	1⅝"	1⅝"	1⅝"
Up to 60,000	1⅝"	1⅝"	1⅝"

*For -20° freezers use one size larger pipe than shown in the table.

TABLE 2—MINIMUM HOT GAS BRANCH LINE FOR MULTIPLE SYSTEM

Branch Line Should Be Less Than 15 Ft. (See Fig. 2)

B.t.u./hr./branch	O.D.
Up to 4,000	½"
Up to 8,000	⅝"
Up to 10,000	⅞"

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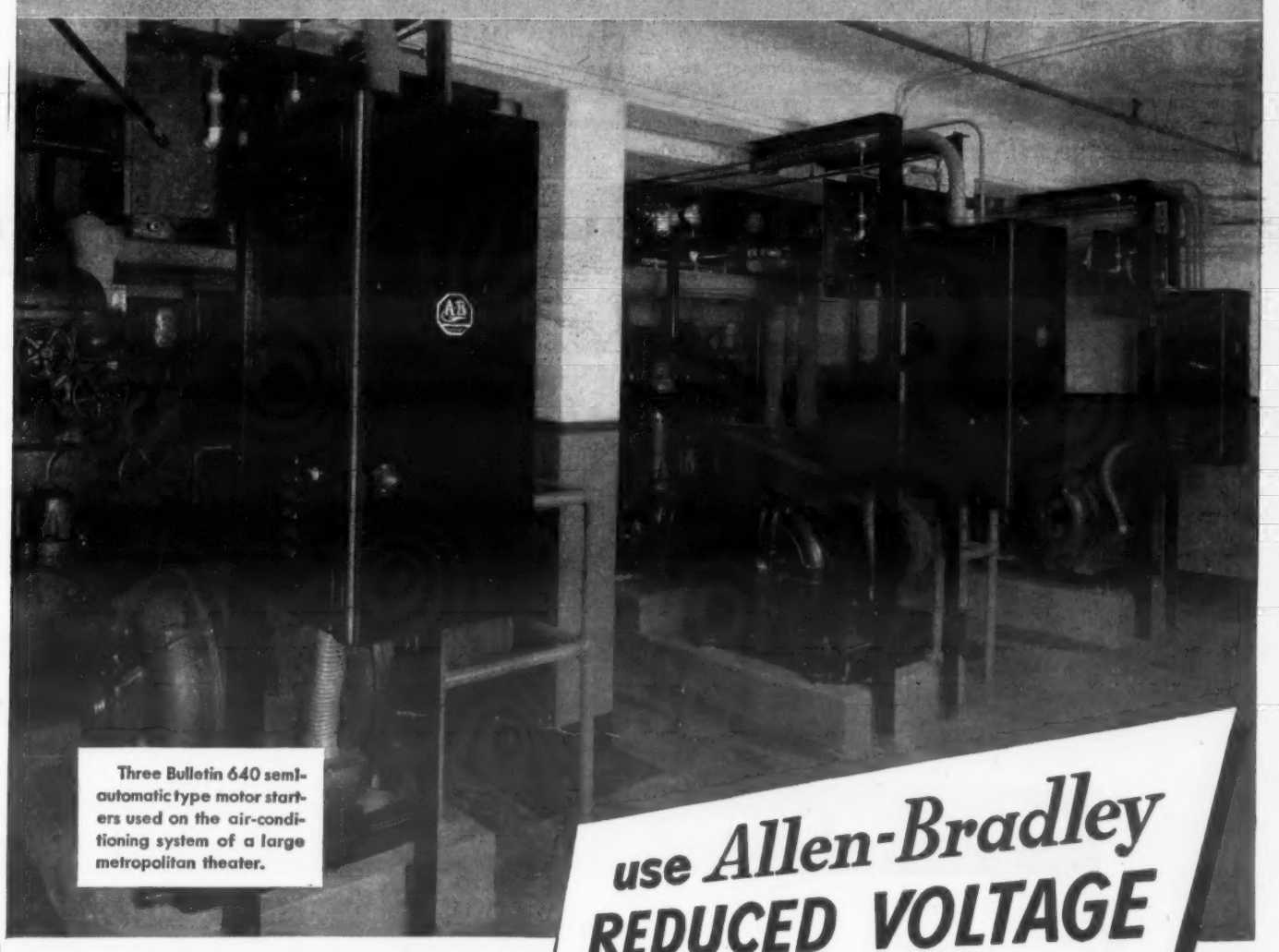

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Fig. 5. Proper Method of Installing the 'Thermobank'

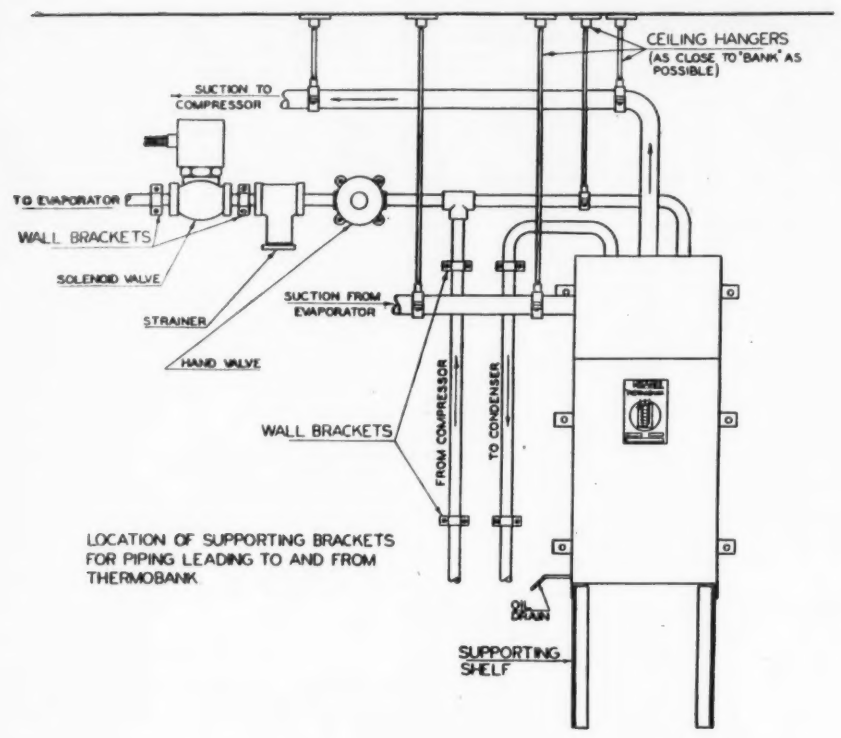
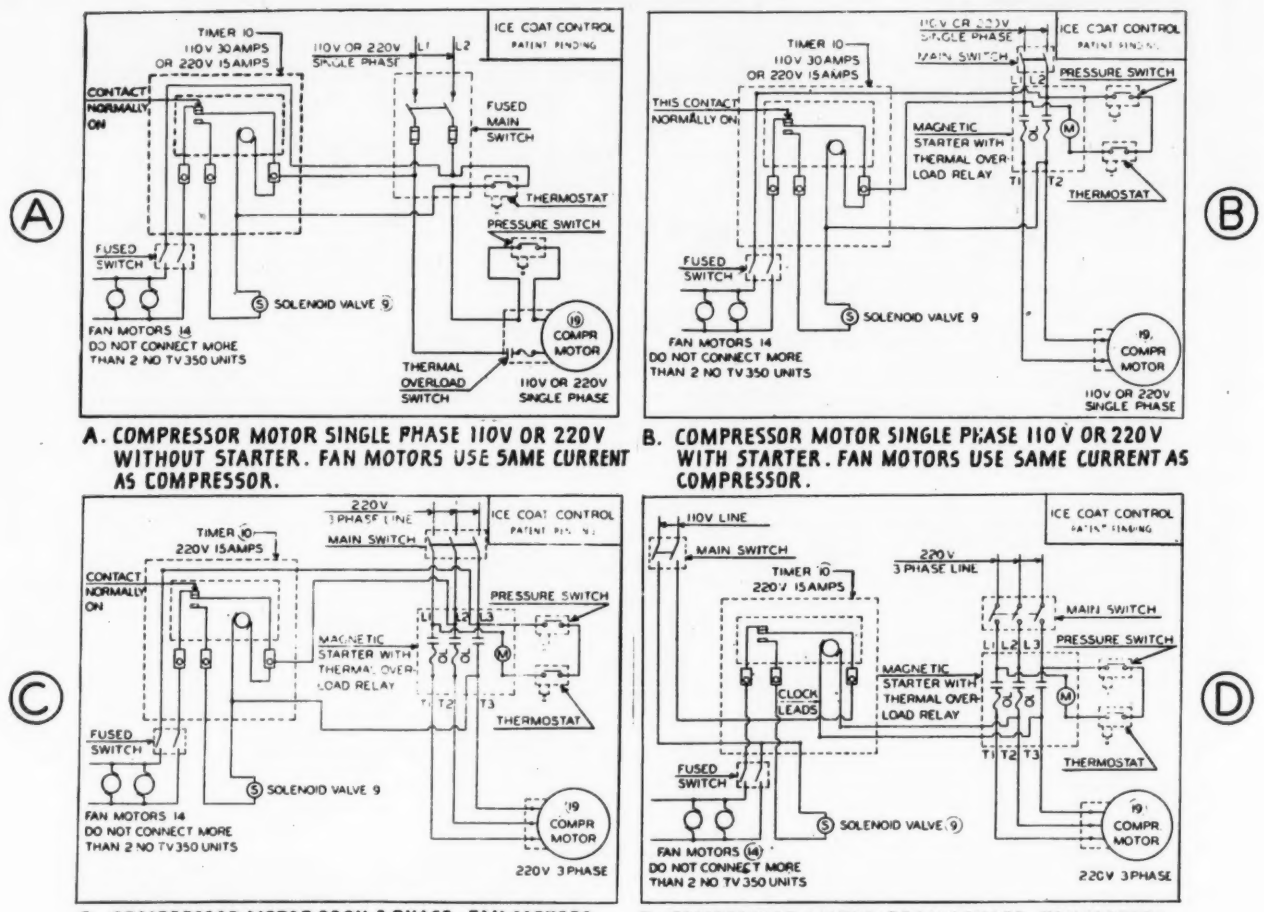


Fig. 7. Wiring Diagram For Systems In Which Thermostat Is Used In Combination With a Pressure Switch



A. COMPRESSOR MOTOR SINGLE PHASE 110V OR 220V WITHOUT STARTER. FAN MOTORS USE SAME CURRENT AS COMPRESSOR.

B. COMPRESSOR MOTOR SINGLE PHASE 110 V OR 220 V WITH STARTER. FAN MOTORS USE SAME CURRENT AS COMPRESSOR.

C. COMPRESSOR MOTOR 220V 3 PHASE. FAN MOTORS 220V SINGLE PHASE.

D. COMPRESSOR MOTOR 220V 3PHASE. FAN MOTORS 110V SINGLE PHASE.

TABLE 4—APPROXIMATE CONTROL SETTING FOR THERMOBANK SYSTEM USING THERMOSTAT IN COMBINATION WITH PRESSURE SWITCH

When using a thermostat, a pressure control (low pressure cut-out) must also be used and set approximately as shown below.

In this instance, the pressure control is used merely as a low and high pressure limit switch. Both the cut-in and cut-out point of the low pressure switch are in this case lower than in Table 3.

Do not use these settings when a pressure switch only is used (refer to Table 3).

Freezer Temperature	Thermostat Setting	Low Pressure Switch Setting, Lbs. Per Sq. In.* Freon-22 Cut-In	Freon-22 Cut-Out	Freon-12 Cut-In	Freon-12 Cut-Out	Methyl Chloride Cut-In	Methyl Chloride Cut-Out
+20°	+20°	37.8	20.2	17.1	7.2	11.0	2.5
+10°	+10°	28.4	13.3	11.3	2.8	6.0	2.7″
0°	0°	20.2	7.5	6.3	1.6″	1.8	8.4″
−10°	−10°	13.3	5.0	2.1	5.4″	3.6″	11.5″
−20°	−20°	7.5	1.6	2.9″	9.6″	9.5″	15.1″

Note: 1. The above settings are only approximate and subject to adjustments depending on the actual suction line pressure drop encountered and also on the balancing point of the evaporator-compressor combination used.

2. Cut-Out Settings take into account normal friction loss in the suction line.

*Figures below black line are inches of mercury vacuum.

Thermobank System--

(Concluded from Page 15, Column 2)

when a refrigeration installation is originally pulled down to temperature. This causes the evaporator to ice up much faster than during normal operation.

During the pull-down period it is necessary to study the ice accumulation and to defrost manually as required. The unit should never be allowed to become ice blocked. Manual defrost is accomplished by tripping the timer switch by hand.

TABLE 3—APPROXIMATE PRESSURE CONTROL SETTINGS FOR THERMOBANK SYSTEM USING PRESSURE SWITCH ONLY

Freezer Temperature	Low Pressure Switch Setting, Lbs. Per Square Inch* Freon-22 Cut-In	Freon-22 Cut-Out	Freon-12 Cut-In	Freon-12 Cut-Out	Methyl Chloride Cut-In	Methyl Chloride Cut-Out
+20°	45.7	24.2	22.4	9.2	15.7	4.2
+10°	34.9	16.6	15.9	4.5	9.9	0.3
0°	25.9	10.3	10.2	0.6	5.1	6.1″
−10°	18.0	6.5	5.4	3.6″	1.0	10.0″
−20°	11.5	2.7	1.3	8.3″	4.9″	13.8″

Note: 1. The above settings are only approximate and subject to adjustments depending on the actual suction line pressure drop encountered and also on the balancing point of the evaporator-compressor combination used.

2. Cut-Out Settings take into account normal friction loss in the suction line.

*Figures below black line are inches of mercury vacuum.

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AIR CONDITIONING & REFRIGERATION NEWS

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Apex Stockholders Create New Classes of Common, Preferred at Meeting

CLEVELAND — Stockholders of The Apex Electrical Mfg. Co., at a special meeting, Aug. 26, approved a plan for company refinancing, according to an annoucement by C. G. Frantz, president.

The plan creates a new class of preferred stock consisting of 40,000 shares of $50 par, and a new class of 450,000 shares of common at $1 par.

The approved plan will split the common stock four for one, which will result in 340,000 shares issued and outstanding, with 110,000 shares to be offered for sale. The refinancing program, traded on the curb, will have the primary effect of converting a substantial proportion of the company's "debt capital" into "equity capital."

The proceeds of the sale of the 40,000 shares of new preferred and 110,000 shares of new common will be used to pay off the remaining balance of a V-T loan and a 1.5 million term loan.

The balance of the funds expected from the sale of the stock will be used to redeem the outstanding shares of 7% prior preferred stock and for the improvement of plant facilities and equipment.

Barlow-Seelig to Make Automatic Washers Dec. 1

FOND DU LAC, Wis.—Occupying 85% of a large war plant here, a new division of Barlow & Seelig Mfg. Co. of Ripon, Wis., will start production of an automatic washing machine about Dec. 1, according to H. A. Bumby, president of the firm which has been making "Speed Queen" wringer type machines since 1908.

The wringer-type machine will continue to be made at the Ripon plant, which will also continue as the administrative and business headquarters of the company. New machines and equipment will soon be moved into the 50,700 sq. ft. plant here which was constructed during the war by the Giddings & Lewis Machine Tool Co. Barlow & Seelig has taken a five-year lease from the War Assets Administration. A part of the building will house office and storage space for the machine tool firm.

A small plant for the production of parts is under construction at Omro, Wis., announced Barlow & Seelig, which also recently leased a building at Montello to produce service parts.

New Texas Firm Readies Plant to Process Quick Frozen Plate Lunches

BROWNSVILLE, Tex. — Pan-Am Freezers, Inc., quick-freeze processing plant, is planning something new in the way of prepared foods. Its new expansion program calls for ready-cooked quick-frozen plate lunches, packed and stored in pressed aluminum plates, ready for the dinner table.

F. H. Floyd, manager, has announced construction has started on the firm's new kitchen, designed to cook the quick-frozen products.

Completion of the kitchen was scheduled for early September. Approximately 35 to 50 specialized employes will be used in the kitchen. Construction and installation of the kitchen will consist of complete white tile flooring and sidewalls and all equipment and utensils will be of stainless steel.

The project will start off conservatively with the cooking and then the quick freezing of single unit dishes such as Mexican chilli, tamales, and the like, but ultimate plans call for a complete dinner, ready to serve after five minutes of heating.

The plant will produce its own pressed aluminum plates. After a balanced meal consisting of meat or seafood, vegetables and dessert has been prepared, the meal will be packed into the aluminum plate, quick-frozen and stored.

Servel Quarterly Report Shows $781,324 Profit

EVANSVILLE, Ind.—A net profit of $781,324, after charges, taxes, and reserves, was reported for the quarter ending July 31, 1946, by Servel, Inc. here.

This reduced the company's net loss for the nine months' period ending July 31 to $374,995, it was reported.

The profit for the quarter, which paid 41 cents per common share after preferred dividend requirements, tripled the $252,634 profit shown for the same period in 1945, and boosted nearly 10 times the $79,378 quoted for the second quarter in 1944.

In both 1944 and 1945, however, Servel showed a profit of more than $1,000,000 for the nine months' period.

Board Says Small Radio Supply Exceeds Demand

WASHINGTON, D. C.—Supplies of small radios are beginning to exceed demand, the Federal Reserve Board reported in its monthly bulletin.

Standard machine tools and truck tires are leading the way into a buyer's market in the producers' goods field, the bulletin added.

It noted that as more tools of production are put into use, they "add considerably to the economy's capacity to produce lower production costs, and reduce labor requirements per unit of output."

Ultimately, it forecast, these developments will have the effect of reducing prices for goods.

Redmond Gets Additional Appointment at Motor Firm

OWOSSO, Mich.—Ralph Redmond, vice president in charge of purchases of the Redmond Co., Inc., here, has been appointed treasurer of the firm, also, according to a recent announcement.

Since he joined the Redmond staff in 1925, Mr. Redmond witnessed the changeover from the manufacture of gasoline filters to small fractional horsepower motors.

Stuffed Toys, Too:

'Most Novel' Home Freezer Is Promised By Company Distributing Beverage Coolers

By John Sweet

CHICAGO—I. R. Rozett, who before the war directed the beverage cooler merchandising setup for Dessent Engineering Co.—one of the biggest of its kind—is now directing service projects of his own here.

Midwest distributor for Artkraft Mfg. Corp., Mr. Rozett also is occupied with several refrigeration and radio-manufacturing plans. And—to complete the picture of his current activities—he is vice president of St. Nick's Workshop, Inc., a stuffed-toy manufacturing firm which he rejuvenated during the war.

All the projects, which he started thinking about three years ago, are being worked out by his own organization, I. R. Rozett & Associates, with the exception of St. Nick's. Both concerns are located in the same building at 2421 W. Division Street.

These projects are said to involve a home freezer, a reach-in refrigerator, a radio, a low-temperature alarm, and "various electronic devices for refrigeration and radio." And, Mr. Rozett observed, "there'll be a lot more coming."

Probably the first to hit the market will be the freezer and the alarm, which are pictured as "just about ready." Experimental testing of both is nearing completion.

Although full details on the freezer are "still secretive," Mr. Rozett describes it with such phrases as "the most novel ever to hit the field" and "the likes of which no one has thought of."

He would say, however, that the freezer's capacity is between 4 and 6 cu. ft., that it is to be equipped with a ⅛-hp. condensing unit, and that it is mostly all porcelain. About 200 units already have been made up, he stated.

"This freezer can be installed in the average-size kitchen and at a price that the average family can afford," he explained.

The reach-in, Mr. Rozett said, will be "slightly different." It is due to be a two-door, self-contained unit of 20-cu. ft. capacity and of ⅓-hp. So far, 10 of these have been made up.

These products will be marketed under a brand name as yet not decided upon. They will be distributed, at least at first, by Rozett & Associates itself. Later, a regular distribution setup probably will be worked out.

Mr. Rozett's distribution of Artkraft's "Bev-food" food and beverage cooler got into high gear about the middle of April. As proof that he hasn't lost his touch in this field, he reports sales of $106,000 in the first 30 days and delivery of about 2,500 coolers to date, most of them complete with unit.

At the present time, he is receiving about 10 cars of coolers a month. Most of the road work is done by three employes.

As for Mr. Rozett's interest in St. Nick's Workshop, that got started through a family acquaintanceship while he was still managing beverage cooler sales for Dessent Engineering. He was invited to try straightening out a floundering toy firm and, although not overly intrigued at first, eventually devoted evenings to the task.

By developing a machine used in the manufacturing process and making changes in the sales program, he helped get the concern back on its feet and in the black.

Launderall Has First Introduction In East

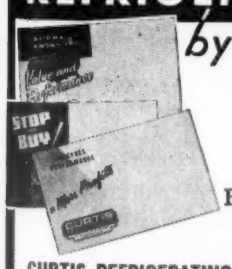
NEW YORK CITY—The first retail introduction of Launderall, the automatic washer developed by F. L. Jacobs Co. of Detroit, was made last week in 11 stores in Westchester County here. Full-page advertisements in nine daily newspapers announced the showings.

Large crowds assembled in New Jersey stores to view the new washer, say department store executives.

"The people on hand to see the Launderall made our store look like a toy store at Christmas," declared Ralph Waltz, president and managing director of Quackenbush Co.

New York City department stores already franchised by Colen-Gruhn, distributor, include R. H. Macy & Co., B. Altman & Co., W. J. Sloane & Co., John Wanamaker Store, Gimbel Bros., Abraham & Straus, Namm, Frederick Loeser & Co., and the Davega chain.

REFRIGERATION by CURTIS



Write for complete information.
Bulletins C-14-M, C-58, C-68-C

CURTIS REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company
1970 Kienlen Avenue • St. Louis 20, Mo.

SUPERIOR VALVE & FITTINGS COMPANY
Pittsburgh 26, Pennsylvania

VALVES, FITTINGS & ACCESSORIES
For All
• Refrigeration
and
• Air Conditioning Systems

DID YOU GET YOURS?
If not, write on your letterhead today for new spring & summer
DEPENDABOOK

THE HARRY ALTER CO.
1728 SO. MICHIGAN AVE. CHICAGO 16, ILL.
Two Big Warehouses To Serve You
134 LAFAYETTE ST. NEW YORK 13, N.Y.

PLATE TYPE EVAPORATORS GIVE *GREATER* PAYLOAD SPACE

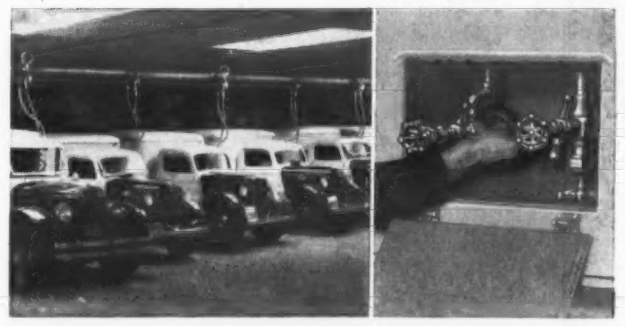
Kold-Hold plates take up little space, leaving room for a larger payload. Regardless of the type of installation for meat, milk, frozen foods, ice cream, they protect and insure the freshness of the load through the longest trip by holding specified temperatures until the day's end.

Kold-Hold's over a decade of experience in designing, engineering and building refrigeration products to meet specific needs, is your guarantee for complete satisfaction on any truck installation.

Providing a cooler room on wheels, not only saves on spoilage, but also on man hours, as nothing needs to be removed from the trucks at night. With a simple extension from your existing cooling system to the Hold-Over Plates in the truck, you have a cooler room on wheels.

At the same time, Kold-Hold truck refrigeration costs less than ice, and Kold-Hold plates will outlast your truck body — and old plates can easily be adapted to meet the needs of your new equipment.

Write today for full information and a complete catalog.



These two photographs show how the efficient system operates with direct connections to the ammonia line. Make and break connections are made within a few seconds.

KOLD-HOLD
KOLD-HOLD MANUFACTURING COMPANY
500 N. Grand Ave. Lansing 4, Mich.

✻ *attend* REMA (Refrigeration Equipment Manufacturers Association Convention will be held in Cleveland Public Auditorium October 28 to October 31). See Kold-Hold equipment at this show in space 414

PATENTS

Week of July 9 (Cont.)

AVAILABLE FOR LICENSING

Pat. 1,961,297. REFRIGERATING SYSTEM. Patented June 5, 1934. Group 35—84. Reg. No. 2,978.

Pat. 2,187,497. REFRIGERATOR. Patented Jan. 16, 1940. Group 35—84. Reg. No. 2,979.

The two patents listed above relate to refrigerating systems of the absorption type operating under pressure lower than atmospheric in which the expansion and contraction of the refrigerant absorb the heat from the surrounding area. Patent 1,961,297 may use water as a refrigerant and an absorbent such as glycerole, two cycles being maintained for the refrigerant and the absorbent. In Patent 2,187,497 pressure is equalized between the evaporator and the absorber and the generator and the reabsorber by an admixture of a neutral gas (hydrogen) to the refrigerant (ammonia) and the absorbent (water). Also should generator heat be insufficient, the pressure differential existing between the generator and the reabsorber will cause the ammonia to diffuse to maintain flow so as not to impair the efficiency of or stop the operation of the system. (Owner) Abraham Katzow, 615 Madison St., Indianapolis, Ind.

Pat. 2,283,213. REFRIGERATING SYSTEM. Patented May 19, 1942. Group 35—84. Reg. No. 2,980.

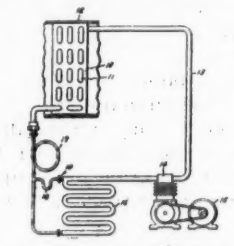
Pat. 2,350,115. REFRIGERATING SYSTEM. Patented May 30, 1944. Group 35—84. Reg. No. 2,981.

The two patents listed above are of the same type as Patents 1,961,297 and 2,187,497 using ammonia as the refrigerant, water as the absorber, and hydrogen as the inert gas. Patent 2,283,213 uses an arrangement of two generators and one or two absorbers. A generator and an absorber are arranged in heat exchanging relationship so that the heat taken up in the generator and emitted in the reabsorber is used to expel the refrigerant from the solution in the associated generator. Patent 2,350,115 uses either one or two condensers with two generators, one condenser being arranged in heat exchanging relationship so that heat absorbed by the refrigerant in the primary generator is given up in the condenser and used to expel the refrigerant from the solution in the associated generator. (Owner) Abraham Katzow, 615 Madison St., Indianapolis, Ind.

Pat. 2,258,744. ELECTRIC WATER HEATER. Patented Oct. 14, 1941. Quick heating, rust-proof water heater for attachment to a cold water faucet. Pressure of water entering casing depresses valve, lowers discharge pipe and closes drain vents of device. The heated water rises to top of its discharge pipe, emptying downwardly. When water is turned off, heater drains automatically, shutting off current. (Owner) John A. Des Rosiers, 397 Sunset Ave., Windsor, Ontario, Canada. Group 36—21. Reg. No. 2,994.

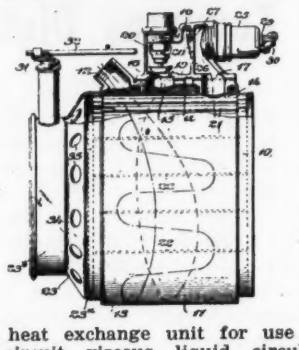
Week of July 16

2,404,010. REFRIGERATING MACHINE. Fred O. Urban, Fort Wayne, Ind., assignor to General Electric Co., a corporation of New York. Original application Jan. 19, 1943, Serial No. 472,818. Divided and this application Nov. 13, 1943, Serial No. 510,105. 4 Claims. (Cl. 62—8.)



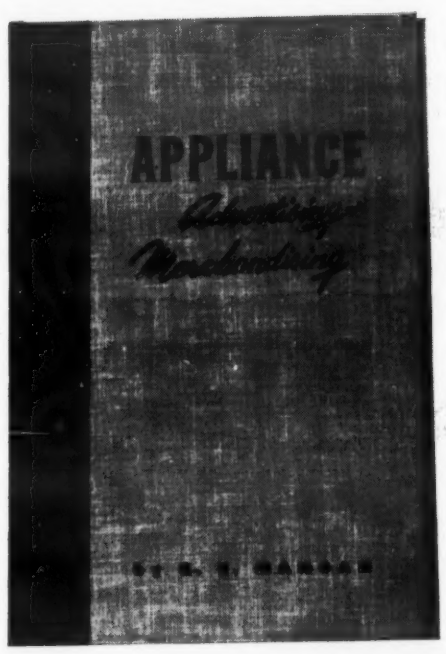
1. A refrigerating machine including an evaporator, means for withdrawing vaporized refrigerant from said evaporator, means for condensing the withdrawn refrigerant to liquefy the same, a capillary tube restrictor for conducting liquid refrigerant from said condensing means to said evaporator, and means associated with a portion of said tube intermediate the ends thereof for admitting to said tube gaseous refrigerant from said condensing means for maintaining the flow of refrigerant to said evaporator within a predetermined range regardless of changes of pressure within said condensing means.

2,404,168. HEAT EXCHANGE UNIT. Walter H. Geddes, Dayton, Ohio, assignor to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio. Application April 7, 1943, Serial No. 482,153. 4 Claims. (Cl. 257—2.)



1. A heat exchange unit for use in a closed-circuit viscous liquid circulating system to cool the liquid during its circulation through the system, said unit comprising a casing having an inlet and an outlet for the liquid, means at the peripheral portion and also at the center portion of said casing for flow of air therethrough in cooling relationship to the liquid flowing therethrough, means to cause the liquid normally to flow through said casing and to flow in bypassing relationship thereto over the outside thereof when the liquid therein is congealed, a shutter casing mounted upon said first mentioned casing at one end thereof and extending beyond said end thereof, said shutter casing including an inner end portion of substantially the same cross sectional size and shape as said first mentioned casing and an outer end portion of reduced cross sectional area, a wall connecting said inner and outer end portions of said shutter casing and having openings therein for flow of cooling air at all times through the air flow means at the peripheral portion of said first mentioned casing, shutters in the said outer end portion of said shutter casing for regulating flow of cooling air through the central portion of said first mentioned casing, and means operable in response to variations in the temperature of the liquid when it is flowing through said casing to effect air-flow regulating actuation of said shutters.

(Concluded on next page, Column 1)



There's an end to that line of customers!

Prewar sales records show that about 20% of the dealers obtained about 80% of the available business. You will want to be in that postwar 20%—you know you've got to advertise and sell efficiently to keep that line of customers. So fill in the blank below and read what Mr. Mangan has to say.

•

APPLIANCE ADVERTISING & MERCHANDISING

10 days free trial

"Appliance Advertising & Merchandising" reveals persuasive methods, crack formulas, and buy-stimulating ideas that have been proved.

All the talent and experience of Author R. E. Mangan's 10 sales-resultful years as ad-man for a big southern California and Arizona distributor—has been packed into this book.

Only one of its kind, it's ready for you to use now. It tells how and where to advertise, step-by-step pointers for increasing the sales-pull in your newspaper, billboard, radio, and screen advertising. It shows you how to build more sales-appeal into your store display.

Lose no time in putting this sales-producer to work for you. Send for your copy today.

•

Business News Publishing Company
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Gentlemen: Please send Mangan's "Appliance Advertising & Merchandising" on 10 day free trial. I'll either send $2.00 upon receipt of bill, or return book in good condition within 10 days.

Name .....

Address ..... City ..... Zone ..... State .....

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.

RATES for all other classifications $5.00 per insertion. Limit 50 words.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

PAYMENT in advance is required for advertising in this column.

POSITIONS AVAILABLE

WANTED—Experienced Service and Installation men by progressive refrigeration contract moving into new $125,000.00 plant handling complete nationally known lines of commercial and industrial equipment. Top journeyman pay for qualified men plus ideal working conditions. JENNINGS REFRIGERATION CO., 2900 East Olympic Blvd., Los Angeles 23, California.

HELP WANTED: Residential manager for Central States Refrigeration Supply jobber. Salary and commission plus pension and profit sharing plan. Territory now established and producing good sales. Opportunity for one who is interested in selling refrigeration supplies wholesale to dealers' service men and contractors. Box 2060, Air Conditioning & Refrigeration News.

DISTRIBUTOR SALES MANAGER—To supervise sales of complete line of domestic oil-fired equipment in manufacturer's home county. Excellent opportunity for aggressive merchandiser in rich market. Full factory cooperation in sales promotion and advertising. Give complete details in first letter. Box 2063 Air Conditioning and Refrigeration News.

EQUIPMENT WANTED

MACHINERY WANTED: Used Motors. Refrigeration type. Will accept burnouts. Any quantity. ¼ hp. A.C. 60 c. 110-120 v. Repulsion, induction or capacitor start. BERLEY CORP, 236 Butler St., Brooklyn, New York.

ONE to three H.P. Air Cooled Cooper Condensers. McLARTY SYSTEMS, 205 West Michigan Ave., Battle Creek, Mich.

NEW OR USED, 2 Freon condensing units, 12 to 15 tons capacity each at minus 30° refrigerant temperature including motors —220 volt, 60 cycle, 3 phase. One 10 hp. Freon condensing unit with motor. Before Nov. 1, 1946. POPE ENGINEERING CO., 8507 N. Port Washington Road, Milwaukee 9, Wis.

EQUIPMENT FOR SALE

U. S. NAVY Cold Storage Warehouses, unused, in original crates, approx. 94 x 13 x 7'6" high. Steel clad inside and out, 5½ inches insulation. Sectional construction permits dividing into smaller boxes. Also large assortment Used Frigidaire WX and DX Coils, excellent condition. All priced right, immediate delivery. COMMERFORD'S, 3674 Whittier Blvd., Los Angeles 23, Calif.

FOR SALE: 10,000 new aluminum ice cube trays in three popular sizes. Also air-cooled and water-cooled remanufactured condensing units ¼ up to 2 hp. Write for particulars. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

IMMEDIATE DELIVERY 20 cu. ft. all-steel glass top Freezers: upright glass top or open, with superstructure; Ice Cream, Frozen Food open and closed cabinets; Reach-ins, Wood and Metal Storage Boxes; all glass Sliding Door Dairy Refrigerators; Beverage Coolers; Air Conditioning Units; Motors 5-20 hp., etc. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, N. Y. Main 2-9093.

FROSTEDAIRE Refrigerated Cabinets 10 cu. ft. for commercial food and ice cream storage, suitable domestic use. Sliding glass top or 6 rubber lids, stainless steel rounded top, 18 gauge steel construction. 5" proven insulation, hermetically sealed hull, "Freon-12" refrigerant. Now available. FROSTEDAIRE CORP. 801 Greenwich St., New York 14, N. Y. CHelsea 3-4900.

NEW TEMPRITE Room Air Conditioners Suitable for office or small store. Rating—2.5 tons or 32,000 B.T.U. per hour. Self-contained, water-cooled condensing unit, and all operating controls, 220 V. Single or three phase operation. Price each $775, discount for quantity. Immediate Delivery. INTERSTATE APPLIANCE CO., INC., 600 Broadway, New York, N. Y., Walker 5-2755.

ICE CREAM LIDS. Ice Cream cabinet 2-hole molded rubber hinged lids with rubber collar. Available in limited quantities. NORTH REFRIGERATION & MFG. CO., 430 Huron Road, Cleveland 15, Ohio.

AIR UNIT—for use in freezers, walk-in coolers or air conditioning. Complete with 7 row, all copper finned coils, casing, insulated panel, fan, low temperature expansion unit, less motor and drive, $115.00 FOB Indianapolis. IMMEDIATE DELIVERY. PALLER ENGINEERING COMPANY, 5610 Carrollton, Indianapolis, Indiana.

IMMEDIATE DELIVERY—Four cylinder gasoline powered refrigeration systems, Universal compressor, blowers, air cooled. Built to deliver 12,000 BTU/hr. at 0° F. Spare parts, crated for export. For any type refrigeration or air conditioning. Convertible to electric. Details furnished. Inspection invited. ROYAL AIR CONDITIONING COMPANY, 607 Rusk, Houston, Texas.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three $6.75 (Part No. 1020). Installation tool $1.65. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

FRIGIDAIRE METER-MISER Terminals. Installed from the inside. Fits compressors with bottom-mounted terminals. (Part No. 1060.) Set of three $2.85. WESTINGHOUSE TERMINALS. Installed from the inside. (Part No. 1030.) Set of three $2.85. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

NORGE CHECK VALVES. For open-type units. (Part No. 1040). $2.55 each. SEALED NORGE terminal packing washers. For repairing leaky terminals. Installed from the outside in a few minutes. (Part No. 1050). Three sets (9 washers) $1.00. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

CUSTOM BUILT—10½ cu. ft. Low Temp. Test Cabinet (to minus 70° F.). Self Contained 1 hp. Two stage Freon 12-lift tops counterbalanced. Used two weeks in war plant. Also 75 lb. bulk Ice Makers—Marine type—New. Write for details and blueprints. Box 2061, Air Conditioning & Refrigeration News.

FRANCHISE WANTED

LINES WANTED by manufacturers' agent covering Wisconsin, Minnesota, Iowa, Nebraska, North and South Dakota, Colorado, Montana. Also interested in covering Metropolitan Chicago calling on refrigeration wholesalers and manufacturers. At present covering this territory for a nationally known line and have covered this territory since 1936. Box 2062 Air Conditioning and Refrigeration News.

FRANCHISE AVAILABLE

MANUFACTURERS—Please Note. Now available, patented plans lowside construction with automatic defrost for low temp. unit coolers. Defrosts without water, electricity, time clocks or any other outside heat. Defrosts only when ice accumulation becomes heavy enough to retard heat exchange. Write R. H. GALBREATH, Patent Attorney, Denver Theatre Bldg., Denver, Colorado.

For COMPETENT PHOTOGRAPHIC SERVICE in the U.S. and Canada, *deal with professional photographic studios which display this emblem.*

SORRY, our supply of the 1946 Directory, listing competent photographers all over the country, is exhausted. However, if you will write us, we shall be glad to see that you receive the 1947 issue, which will be available early in the year.

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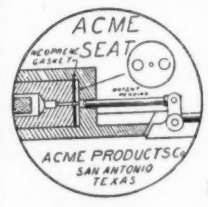
520 Caxton Building • Cleveland 15, Ohio

SERVICE MEN: Don't Bother to Reface Frigidaire L/S Floats. USE ACME REPLACEMENT SEATS.



see or write
Associated Refrigeration & Equipment Co. Sacramento.
Standard Brass & Mfg. Co. Port Arthur-Shreveport.
Debes & Company Cleveland.

HEAT TRANSFER EQUIPMENT
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

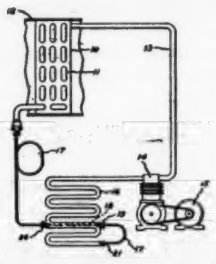
COMPLETE CARRIER
7½ H.P. REFRIGERATION UNITS
50 or 60 cycle motors. "Freon." High and low sides in one assembled package. Also available identical units as above, operated by CONTINENTAL GASOLINE ENGINE—4 cylinder. Immediate delivery. Crated for Export. Suitable for low and medium temperature walk-in refrigerators. Air conditioning applications. Useful in tropical climates. ALSO REFRIGERATED WALK-IN WAREHOUSES. 1800 cu. ft. Steel and wood construction.
GENERAL REFRIGERATORS CORP
678 Broadway, N. Y., 12, N. Y., ST 9-1222

PURO ELECTRIC WATER COOLERS
BRANCHES IN PRINCIPAL CITIES
MAIN OFFICE
440 LAFAYETTE ST.
New York 3, N. Y.
PURO FILTER CORP. OF AMERICA
DRINKING WATER SPECIALISTS FOR 40 YEARS.

Patents (Con't)

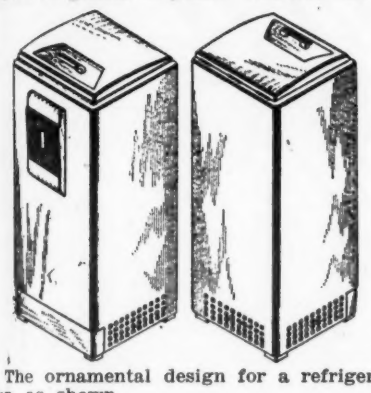
(Concluded from preceding page)

2,404,112. REFRIGERATING MACHINE. Fred O. Urban, Fort Wayne, Ind., assignor to General Electric Co., a corporation of New York. Application Jan. 19, 1943, Serial No. 472,818. 13 Claims. (Cl. 62—8.)



1. A refrigerating machine including an evaporator, means for withdrawing vaporized refrigerant from said evaporator, means for liquefying the withdrawn refrigerant, a restrictor tube for supplying liquid refrigerant from said liquefying means to said evaporator, said tube during at least a portion of the range of operation of said machine producing a reduction of refrigerant pressure sufficient to cause vaporization of liquid refrigerant within said tube, and means directly responsive to a condition of operation of said liquefying means and attached to a portion of said tube spaced from both ends of said tube for varying the proportion of vaporized refrigerant with respect to liquid refrigerant in said portion of said tube in accordance with changes in the pressure difference between the ends of said tube.

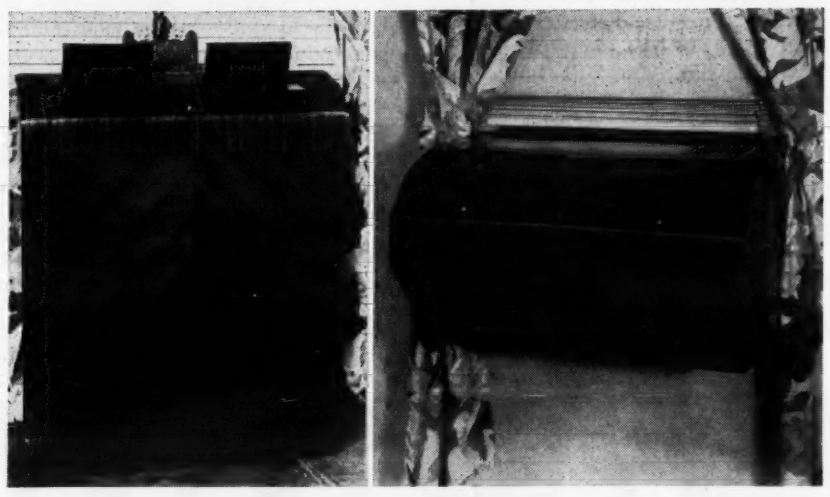
145,222. DESIGN FOR A REFRIGERATOR. Raymond Loewy, New York, N. Y., assignor to The Coca-Cola Co., Wilmington, Del., a corporation of Delaware. Application Dec. 21, 1945, Serial No. 124,919. Term of patent 14 years. (Cl. D67—3.)



The ornamental design for a refrigerator, as shown.

What's New

New Features Claimed for York Conditioners



Two of the three Yorkaire room conditioners announced by York Corp. are shown above. The console model at left is powered by a ¾-hp. motor and is designed for rooms up to 20 x 25 ft. in size. It is rated at 9,000 B.t.u. per hour. At the right is one of the two window units. One is powered by a ½-hp. motor, the other by a ¾-hp. machine.

* * *

3 New Room Coolers Introduced by York

YORK, Pa.—Three new Yorkaire room conditioners, particularly designed for homes and small offices, are being introduced by the York Corp. here.

Two are window sill models and the third is a console model.

The two window sill models are the same size: 26½ in. wide, 14 5/6 in. high, and 19¼ in. deep.

One is intended to condition rooms up to 15 x 19 ft. and has a ½-hp. condensing unit. It is said to be able to remove one quart of water (condensed moisture) hourly and remove 5,250 B.t.u. each hour when the outside temperature is 90° dry bulb, and 75° wet bulb, and when the inside temperature is 80° at 50% relative humidity.

The other, designed for rooms up to 20 x 20 ft., has a ¾-hp. unit. It will remove 48 oz. of water and 7,750 B.t.u. hourly, the manufacturer claims.

The console model, which stands 39 9/16 in. high, and is 32½ in. wide and 19 15/16 in. deep, is also equipped with a ¾-hp. motor. It is designed for rooms up to 20 x 25 ft. and is said to remove 9,000 B.t.u. hourly and will take 56 oz. of water from the air every hour.

All models are portable and are housed in walnut wood cabinets which are said to harmonize with every type of interior decoration. The controls are set into the cabinet so that they can be covered and concealed.

While cooling, each conditioner can remove 60 cu. ft. of stale and smoky air per minute, the manufacturer claims. Without cooling they can change 240 cu. ft. per minute.

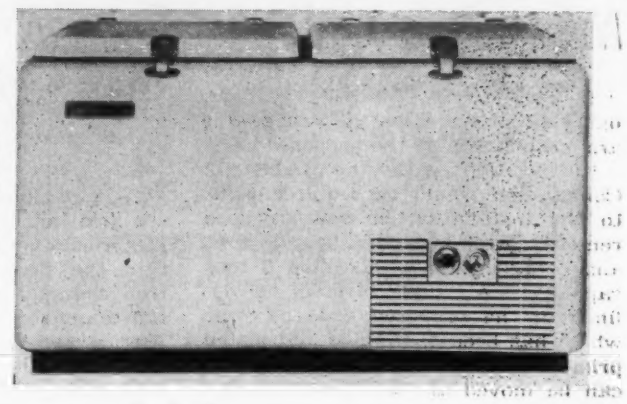
Moisture condensed from the room air is completely evaporated into the rejected air stream and no plumbing installations are required, the company says.

Four air outlet doors can be set at any position, it is said. The louvers may be moved laterally to control the flow of cool air in any direction.

A small sliding curtain may be instantly adjusted to admit any proportion of fresh air and give the degree of ventilation desired, according to the manufacturer.

With the window unit models, a "cradle" is installed to support the conditioners on the window sill.

This 12½ cu. ft. deluxe home freezer introduced by Ben-Hur Mfg. Co. has a stainless steel lining. The interior is divided into a 3.7 cu. ft. freezing compartment and an 8.8 cu. ft. frozen storage section.



* * *

MILWAUKEE — Separate freezer and frozen storage compartments are featured in the new deluxe model farm and home freezer now being produced by the Ben-Hur Mfg. Co. here.

This 12½ cu. ft. capacity freezer has a freezing compartment of 3.7 cu. ft. and a frozen storage compartment of 8.8 cu. ft. The latter is said to have a capacity of approximately 630 pounds of frozen foods.

These separate compartments were installed to prevent the latent heat of fresh foods from affecting the temperatures of foods in the frozen storage comparment, Ben-Hur engineers point out.

This deluxe model designed for the large family also features a stainless steel inner lining and debossed reinforcing ribs in the shape of a huge "X" inside the cover to give it added strength.

Designed to fit in with other features of the kitchen, the new model compares in height with the kitchen tables and work boards, the manufacturer states. The flat top provides an additional working surface for the housewife, it is said. All corners of the white enameled cabinet are rounded.

Air louvers at the bottom of the freezer are flush with the cabinet and spaced to allow maximum air circulation, it is said. The control switch is conveniently set at the top of the louvers.

The freezer is 28½ in. wide, 63 in. long, and 36 in. high. It weighs approximately 565 lbs.

'Fresher Zone' Filter

* * *

Carbon Unit Absorbs Refrigerator Odors

KANSAS CITY, Mo. — Fresher Zone, a new aluminum air filter designed to absorb refrigerator odors is now being manufactured by the Presco Co. here.

The filter contains "activated carbon" pellets made from the husks of coconuts, the manufacturer says. He claims that these grains will absorb thousands of times their own volume in odorous gases and will not wear out for many years.

Adequate for any unit up to 12-cu. ft. capacity, the filter is about the size of a folded newspaper, ⅜ x 5⅝ x 13 in. Two door refrigerators require two filters, the manufacturer says.

Fresher Zone can be placed in any location in the box. Only care required is to air the filter for four or five hours at least twice a month. Maximum service can be obtained by baking the unit for 30 minutes in a 300° F. oven, thus removing the moisture, according to the company.

Retail price is set at $4.95.

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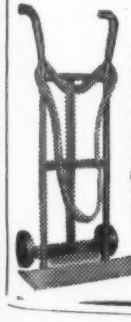

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Milwaukee Code--

(Concluded from Page 1, Column 4)

using air or water as the refrigerant are not affected by the proposed code.

Registration with the Industrial Commission would be required prior to the installation of new or used remote systems exceeding 1½ tons and "unit" systems exceeding 3 tons capacity. A "unit" system is defined in the proposed code as "one which has been assembled and tested prior to its installation and which can be moved about without disconnecting any refrigerant-containing parts."

Either the owner or the installing contractor may file the required registration certificate, which calls for such information as type of system, type of work it performs, model and serial numbers, tonnage, and refrigerant. A similar certificate must be posted on or near the premises during the installation of the equipment.

Among other requirements of the proposed code is one calling for a pressure relief valve or pressure limiting device on each compressor over ½ ton but not exceeding 3 tons. Those over 3 tons "shall be equipped with adequate pressure relief valve capacity," states the code.

With regard to location of refrigerating systems the new code would have three restrictions:

"1. No refrigerating system exceeding ½ ton capacity and using a refrigerant listed under Group 2 or 3 of Table 1 shall be located in a hospital or in any institution or place where persons are helpless or confined."

(Group 2 refrigerants include ammonia, methyl chloride, sulphur dioxide, dichloroethylene, ethyl chloride, and methyl formate. Group 3 refrigerants are butane, ethane, isobutane, and propane. Listed as Group 1 are carbon dioxide, Carrene No. 1, and the "Freons"—11, 12, 21, 22, 113, 114.)

"2. In all other places refrigerating compressors exceeding 5 tons capacity and using a refrigerant listed under Group 2 or 3 of Table 1 shall be placed in a room apart from any other room where more than five persons (not including engineering personnel) assemble or are employed.

"3. Refrigeration compressor, condenser, and/or reciver rooms shall not be used as dressing, lunch, or recreation rooms except by those actively engaged in the operation of the refrigerating machinery."

Establishments containing refrigerating system filled with Group 2 refrigerants of between 100 and 1,000 pounds must be equipped with a safety mask or helmet. Two masks are required if the system exceeds 1,000 pounds of Group 2 refrigerant.

Substitution of a refrigerant in a system not specifically designed for that refrigerant would require written permission from the Industrial Commission under the new code.

Check valves would be required in systems under the following conditions:

"1. In the discharge pipe from each refrigerating machine as close to the machine as is practical when the machine exceeds 3 tons capacity and uses a refrigerant classified under Group 2 or 3."

"2. When a hot gas defrosting line is used, there shall be a check valve in the discharge line between the condenser and the point where the hot gas line connects ito the discharge line."

"3. Check valves shall be installed in an absorption system exceeding 3 tons capacity and shall be located between the rectifier and the condenser and in the discharge line close to the aqua pump."

Acme Supplies Opens In New Orleans

NEW ORLEANS — Acme Refrigeration Supplies, Inc., temporarily located at 618 S. Peters St. here, has announced the opening of a supply house to serve the refrigeration, air conditioning, and heating trades in the New Orleans area.

The firm will occupy its permanent home on or about Oct. 1 of this year, according to Andrew Feigler, secretary-treasurer of the corporation. A temporary warehouse has been secured to handle shipments until that time, he added.

Other officers of the corporation are: Harry A. Dawson, president; and F. J. Gisevius, vice president.

Pig Iron Shortage May Curb Production

(Concluded from Page 1, Column 5)

ter. In fact, members of the Malleable Iron Industry Advisory Committee said that their worries regarding pig iron supplies adequate to maintain the present rate of malleable iron castings production are for the fourth quarter more than they are for August and September. They asked that CPA regulate inventories not only of pig iron, but of the products made from allocated pig iron.

No final decisions will be made on actions to be taken regarding pig iron allocations for the fourth quarter until CPA has more complete information on the supply situation, Mr. Houston has informed the committee.

Palmer Supply Co. New REWA Member

TULSA, Okla.—The Palmer Supply Co., parts and supplies wholesaler, has recently been elected a member of the Refrigeration Equipment Wholesalers Association.

R. W. Palmer and E. L. Lanning are partners in the firm, which is located at 820 E. Third St. here. Mr. Palmer will act as Association representative.

Koerner Service Files Name For New Firm In Buffalo

BUFFALO, N. Y. — A business name has been filed for the Koerner Refrigeration Service, 580 Abbott Rd., by Ferdinand J. Koerner.

Bigger Than A Box Car:

New 'Stratofreighter' Air Cargo Carrier To Include Refrigerated Compartments

SEATTLE—Designed as the largest and fastest commercial air freighter in the world, a new double-deck, four-engined, all cargo "Stratofreighter" is planned by the Boeing Aircraft Co. here.

Advanced refrigeration and heating systems will provide special temperatures to each of the four freight compartments, according to the company.

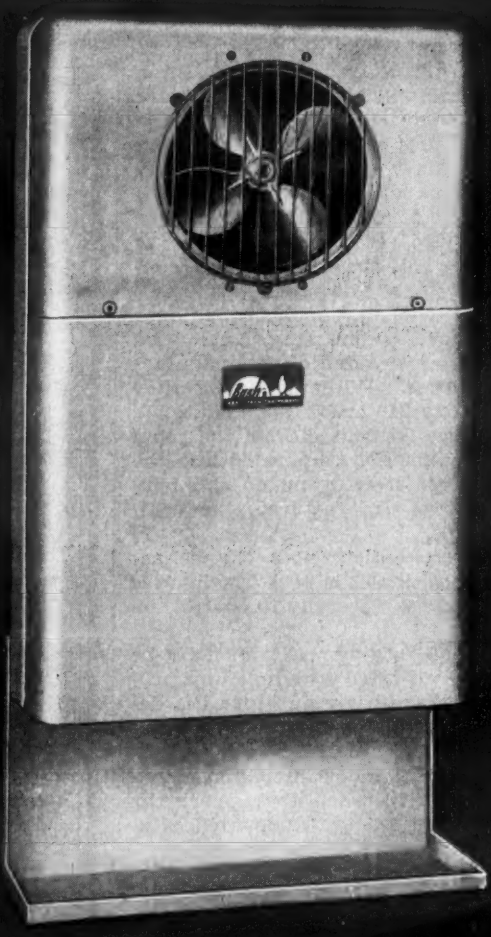
With a volume nearly twice that of an average railroad boxcar, the Stratofreighter, sister ship to the Boeing 80 passenger Stratocruiser, will carry a maximum pay load of 41,000 pounds at cruising speeds of 300 to 350 miles per hour, the company declared.

The company expects the new giant air freighter to operate at 3.9 cents per ton-mile.

Three holds will be built in the lower deck for short haul cargo, while the 74½ ft. long upper deck will carry the main cargo, the company said.

The Stratofreighter will include a Boeing designed altitude conditioning system which maintains sea level conditions at altitudes up to 15,000 ft., it was reported.

BUSH UNITS...



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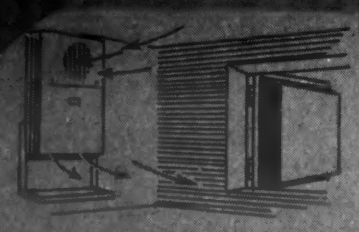

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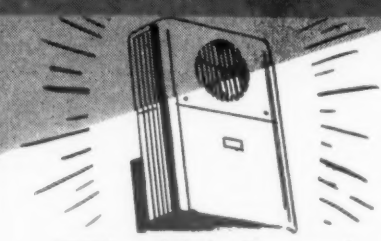

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